Self Diagnosis Supported model

SERVICE MANUAL

BA-4D CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.
KV-20M42	RM-Y156	US	SCC-S27A-A
KV-20M42	RM-Y156	CND	SCC-S28B-A
KV-20S42	RM-Y155	US	SCC-S27B-A
KV-20S42	RM-Y155	CND	SCC-S28C-A
KV-20S43	RM-Y156W	US	SCC-S27C-A
KV-20S43	RM-Y156W	CND	SCC-S28D-A
KV-21MB42C	RM-Y156	E	SCC-S25E-A
KV-21MB42M	RM-Y156	MX	SCC-S26A-A
KV-21MB42P	RM-Y156	E	SCC-S25A-A
KV-21ME42	RM-Y156	E	SCC-S25B-A
KV-21ME42C	RM-Y156	E	SCC-S25F-A
KV-21SB42C	RM-Y155	E	SCC-S25G-A
KV-21SB42M	RM-Y155	MX	SCC-S26B-A
KV-21SE42	RM-Y155	E	SCC-S25D-A
KV-21SE42C	RM-Y155	E	SCC-S25H-A
KV-21SE82	RM-Y165	E	SCC-S25J-A
KV-21SE82C	RM-Y165	E	SCC-S25K-A

KV-21SE82

RM-Y155

MICROFILM

TRINITRON® COLOR TV

SONY®

SPECIFICATIONS

	KV-20M42	KV-21MB42C, KV-21MB42M, KV-21MB42P	KV-21ME42, KV-21ME42C	KV-20S42, KV-20S43	KV-21SB42C, KV-21SB42M	KV-21SE42, KV-21SE42C	KV-21SE82, KV-21SE82C
Power Requirements	120V 60Hz	AUTO VOLT 120-220V, 50/60 Hz	AUTO VOLT 120-220V, 50/60 Hz	120V 60 Hz	AUTO VOLT 120-220V, 50/60 Hz	AUTO VOLT 120-220V, 50/60 Hz	AUTO VOLT 120-220V, 50/60 Hz
Number of inputs/outputs							
Video [1]	2	2	2	2	2	2	2
Audio Input [2]	2	2	2	2	2	2	2
Audio Out [3]	-	-	-	-	-	-	1
Speaker Output (W)	3W	3W	3Wx2	3W x 2	3Wx2	4Wx2	5Wx2
Power Consumption (W)							
In Use (Max)	80W	80W	80W	90W	90W	90W	90W
In Standby	1W	1W	1W	1W	1W	1W	1W
Dimensions (W/H/D)							
(mm)	522 x 477 x 479 mm	522 x 477 x 479 mm	522 x 477 x 479 mm	522 x 477 x 479 mm	522 x 477 x 479 mm	522 x 477 x 479 mm	522 x 477 x 479 mm
(in)	$20^{5}/_{8}$ x $18^{13}/_{16}$ x $18^{7}/_{8}$ in.	$20^{5}/_{8}$ x $18^{13}/_{16}$ x $18^{7}/_{8}$ in.	$20^{5}/_{8}$ x $18^{13}/_{16}$ x $18^{7}/_{8}$ in.	$20^{5}/_{8}$ x $18^{13}/_{16}$ x $18^{7}/_{8}$ in.	$20^{5}/_{8}$ x $18^{13}/_{16}$ x $18^{7}/_{8}$ in.	$20^{5}/_{8}$ x $18^{13}/_{16}$ x $18^{7}/_{8}$ in.	$20^{5}/_{8}$ x $18^{13}/_{16}$ x $18^{7}/_{8}$ in.
Mass							
(kg)	21.6 kg	21.6 kg	21.6 kg	21.6 kg	21.6 kg	21.6 kg	21.6 kg
(lbs)	48 lbs.	48 lbs.	48 lbs.	48 lbs.	48 lbs.	48 lbs.	48 lbs.

[1] 1 Vp-p 75 ohms unbalanced, sync negative

[2] 500 mVrms (100% modulation), impedance: 47 kilohms

[3] More than 408 mVrms at the maximum volume setting (variable)
More than 408 mVrms (fix), Impedance: 5 kilohms

Television system
American TV standard/NTSC

Picture tube
Trinitron® Tube

Channel coverage
VHF:2-13/UHF:14-69/CATV:1-125

Visible screen size
20" picture measured diagonally

Actual screen size
21" picture measured diagonally

Antenna
75 ohm external terminal for VHF/UHF

Supplied Accessories
Remote Commander (RM-Y155)
(KV-20S42/21SB42M/42C/21SE42/42C)
Remote Commander (RM-Y156)
(KV-20M42/21MB42C/42M/42P/21ME42/42C)
Remote Commander (RM-Y156W)
(KV-20S43)
Remote Commander (RM-Y165)
(KV-21SE82/82C)
Size AA (R6) batteries (2)

Optional Accessories
Dipole antenna
Connecting cables VMC-810S/820S, VMC-720M, YC-15V/30V, RK74A
U/V mixer EAC-66

Design and specifications are subject to change without notice.

(●) SRS (SOUND RETRIEVAL SYSTEM)

The **(●)** SRS (SOUND RETRIEVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

The word 'SRS' and the SRS symbol **(●)** are registered trademarks of SRS Labs, Inc.

BBE and BBE symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258 and 4,482,866.

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WARNINGS AND CAUTIONS

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS, AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNEIMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONTIONNEMENT SUSPECTE.

SELF-DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

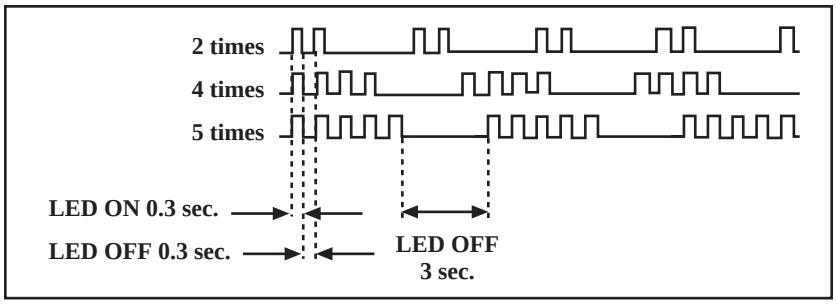
Results for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

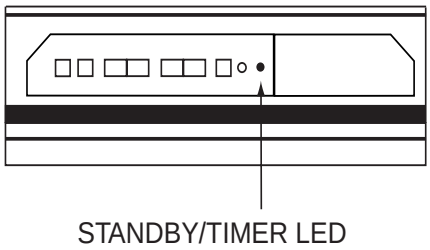
Diagnostic Item Description	No. of Times STANDBY/TIMER LED Flashes	Self-diagnostic Display/ Diagnostic Result	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	———	• Power cord is not plugged in. • Fuse is burned out (F601).	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
+B overcurrent (OCP)*	2 times	2:0 or 2:1	• H.OUT (Q502) is shorted (A Board) • IC701 and Q701 (C Board) are shorted.	• Power does not come on. • Load on power line is shorted.
Vertical deflection stopped*	4 times	4:0 or 4:1	• +13V is not supplied. (A Board) • IC541 is faulty. (A Board)	• Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
White balance failure (not balanced)	5 times	5:0 or 5:1	• Video OUT (Q394 to 392) is faulty. (A Board) • IC301 is faulty. (A Board) • Screen (G2) is improperly adjusted.**	• No raster is generated. • CRT cathode current detection reference pulse output is small.

* If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

** Refer to Screen (G2) Adjustments in Sections 3 and 4 of this manual.

Display of Standby/Timer LED Flash Count





Diagnostic Item	Flash Count*
+B overcurrent	2 times
Vertical deflection stopped	4 times
White balance failure	5 times

*One flash count is not used for self-diagnostic.

Stopping the Standby/Timer LED Flash

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LED from flashing.

Self-Diagnostic Screen Display

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:

Display → Channel 5 → Sound volume − → Power ON

Note that this differs from entering the service mode (sound volume +).

Self Diagnostic Screen Display

SELF DIAGNOSTIC			
2:		0	← Numeral “0” means that no fault was detected.
3:	N/A	0	
4:		0	
5:		1	← Numeral “1” means a fault was detected one time only.
101:	N/A	0	

Handling of Self-diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

Clearing the Result Display

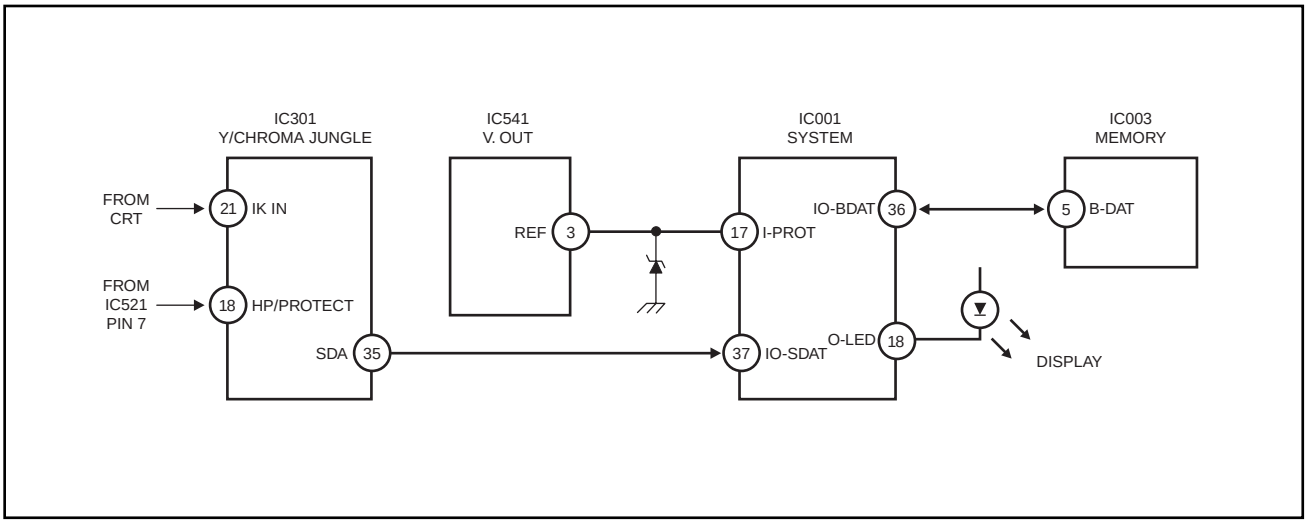
To clear the result display to “0”, press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel [8] ➡ [ENTER]

Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

Self-diagnostic Circuit



+B overcurrent (OCP) — Occurs when an overcurrent on the +B (115V) line is detected by pin 18 of IC301. If the voltage of pin 18 of IC301 is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

Vertical deflection stopped — Occurs when an absence of the vertical deflection pulse is detected by pin 17 of IC001. Power supply will shut down when waveform interval exceeds 2 seconds.

White balance failure — If the RGB levels* do not balance within 2 seconds after the power is turned on, this error will be detected by IC301. TV will stay on, but there will be no picture.

*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K.)

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or touching high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampere). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson’s 250 and Sanwa SH-63Trd are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

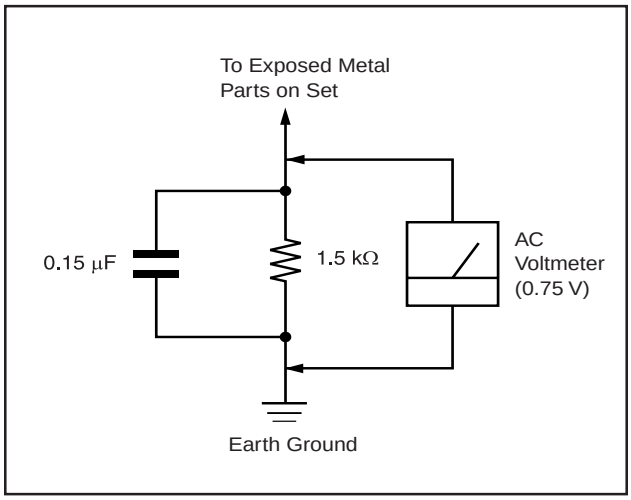


Figure A. Using an AC voltmeter to check AC leakage.

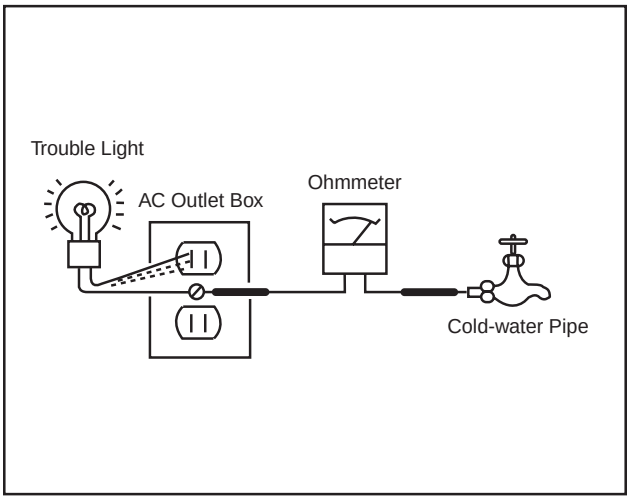


Figure B. Checking for earth ground.

The instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

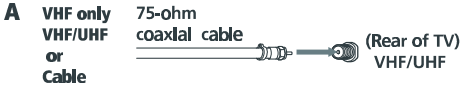
Connecting Your TV

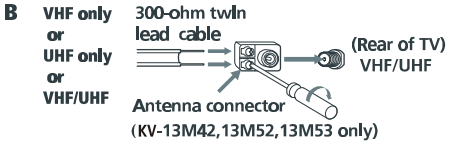
Read this chapter before setting up your TV for the first time. This section covers basic connections in addition to any optional equipment you may be connecting.

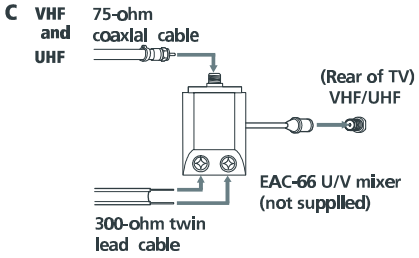
Basic Connections

TV with indoor or outdoor antenna, or CATV cable

Depending on the cable available in your home, choose one of the connections below:



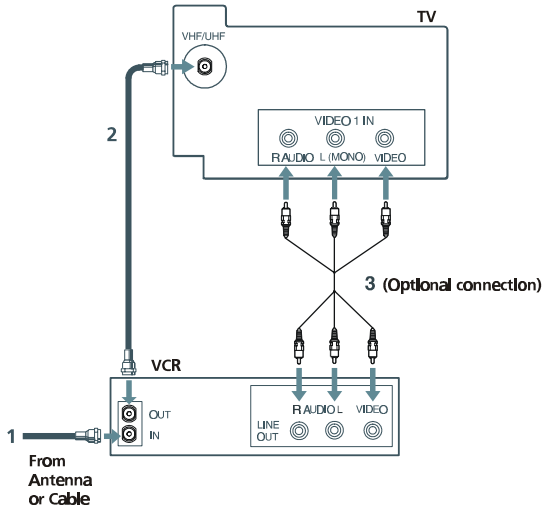




If you are connecting to an indoor or outdoor antenna, it will be necessary to adjust the orientation of the antenna for best reception.

Connecting Additional Equipment

TV and VCR



1 Connect the coaxial cable from your TV antenna or cable TV to the IN jack on your VCR.

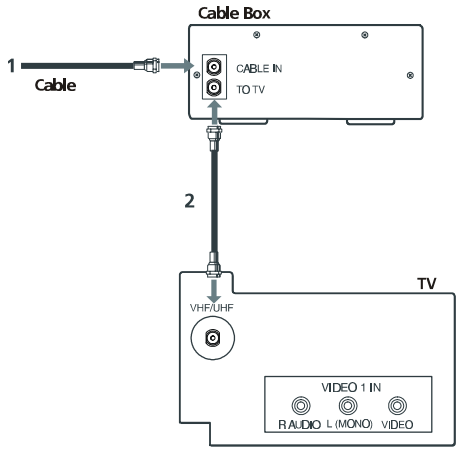
2 Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF / UHF IN jack on the TV.

To watch video programs from your VCR, tune your TV to channel 3 or 4 (as set on the rear of your VCR).

(Optional Connection)

3 If your VCR is equipped with video inputs, for best picture quality you should connect A / V connectors to AUDIO / VIDEO OUT on your VCR to AUDIO / VIDEO IN on your TV. You can use the TV/VIDEO button to switch between the TV and VCR inputs.

TV and Cable Box



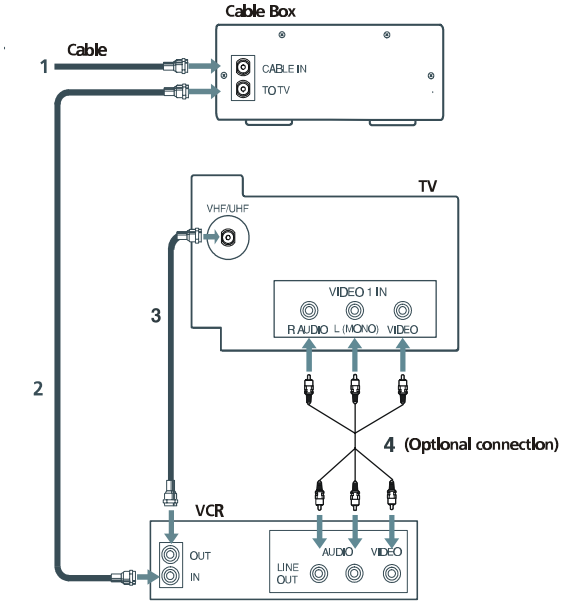
1 Connect the coaxial cable from the wall to the IN jack on your cable box.

2 Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the VHF / UHF IN jack on the TV.

To view channels from your cable box, tune your TV to channel 3 or 4 (as set on the rear panel of your cable box) and use the cable box's remote control to change channels.

If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature on page 17.

TV, VCR, and Cable box



1 Connect the coaxial cable from the wall to the IN jack on your cable box.

2 Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the IN jack on your VCR.

3 Connect a coaxial cable from OUT on your VCR to VHF / UHF IN on your TV.

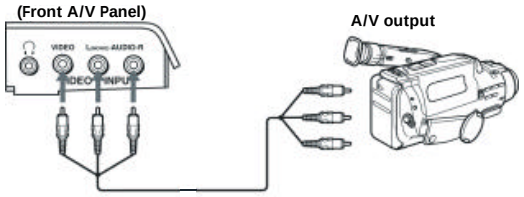
If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature on page 17.

(Optional Connection)

4 If your VCR is equipped with video inputs, for best picture quality you should connect A / V connectors to AUDIO / VIDEO OUT on your VCR to AUDIO / VIDEO IN on your TV. You can use the TV/VIDEO button to switch between the TV and VCR inputs.

Connecting a Camcorder

Using A / V cables, connect AUDIO and VIDEO OUT on your camcorder to AUDIO and VIDEO IN on your TV.



For model KV-13M42, this connection can be made to the A/V input located on the rear of the TV.

Using the Remote Control and Basic Functions

This section shows you how to use more advanced buttons on the remote control and how to use the on-screen menus.

SLEEP	Turns the TV off automatically in approximately 30, 60 or 90 minutes. Cancel by pressing until SLEEP OFF appears.
MUTING	Instantly turns off the sound. Press again or press VOL + to restore sound.
TV/VIDEO	Cycles through the available video inputs.
DISPLAY	Press once to show current time, (if set) and channel number. Press again to activate CAPTION VISION settings, if available. To cancel, press again until DISPLAY OFF appears.
MTS	Cycles through the Multi-Channel TV Sound (MTS) options: STEREO, SAP (Second Audio Programming) and MONO, (KV-20S42, 20S43 only).
2 -	Press for channel selection, the channel will change after 2 seconds.
ENTER	Press after selecting a channel using the 2- buttons to immediately activate selection.
JUMP	Alternates back and forth between the last two channels selected with the 2- buttons.
MENU	Displays the on-screen menu. Press again to exit the menu at any time.
SELECT	Activates highlighted selections in the on-screen menu.
	Moves the cursor in the on-screen menu.
RESET	Press to restore factory settings while in the on-screen menu.

Buttons shown are for remote control RM-Y155, your remote control may not look exactly like the one illustrated.

Other Information

Troubleshooting

If you are having a problem with your TV, try the suggestions below. If the problem persists, contact your nearest Sony dealer.

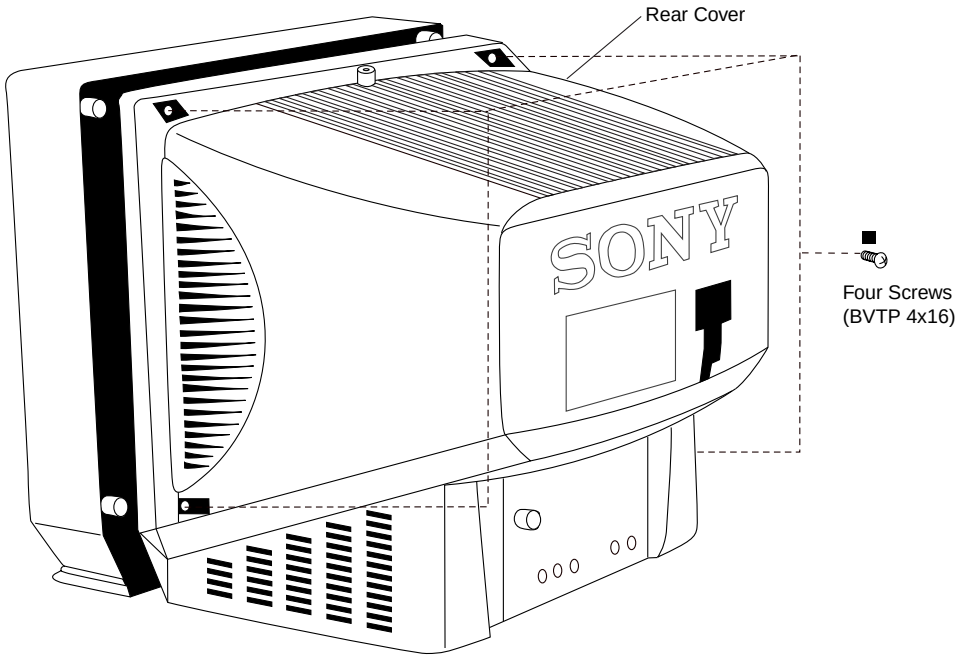
No picture, no sound	❑ Make sure the power cord is plugged in. ❑ If a red light is flashing on the front of your TV for more than a few minutes, call your local service center. ❑ Check the TV / VIDEO settings: when watching TV, set to TV; when watching video equipment, set to VIDEO (page 13). ❑ Check your PARENTAL CONTROL settings, (see pages 22-23). ❑ Make sure the batteries have been inserted correctly into the remote control. ❑ Try another channel, it could be station trouble.
Poor or no picture, good sound	❑ Adjust PICTURE in the VIDEO menu (page 13). ❑ Adjust BRIGHTNESS in the VIDEO menu (page 13). ❑ Check the antenna and / or cable connections (page 3).
Good picture, no sound	❑ Press MUTING so that MUTING disappears from the screen (page 9). ❑ Check your AUDIO settings. Your TV may be set to SAP (page 14).
No color	❑ Adjust COLOR in the VIDEO menu (page 13).
Only snow appears on the screen	❑ Check the CABLE setting in the SET UP menu (page 17). ❑ Check the antenna and / or cable connections (page 3). ❑ Make sure the channel selected is currently broadcasting.
Dotted lines or stripes	❑ Adjust the antenna. ❑ Move the TV away from other electronic equipment. Some electronic equipment can create electrical noise, which can interfere with TV reception.
Double images or ghosts	❑ Check your outdoor antenna or call your cable service.

Cannot receive higher number channels (UHF) when using an antenna	❑ Make sure CABLE is set to OFF in the SET UP menu (page 17). ❑ Use AUTO PROGRAM to add channels that are not presently in the memory (page 17).
Cable stations don't seem to work	❑ Make sure CABLE is set to ON in the SET UP menu (page 16). ❑ Use AUTO PROGRAM to add channels that are not presently in the memory (page 17).
Remote control does not operate	❑ Batteries could be weak. Replace them (page 2). ❑ Move the TV 3-4 feet away from fluorescent lights.
The TV needs to be cleaned	❑ Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzine, which might damage the finish of the cabinet.
Lost password for PARENTAL CONTROL	❑ In the password screen, enter the following master password: 4357. After using the master password, you must create a new password, it cannot be used to unlock currently blocked programs.

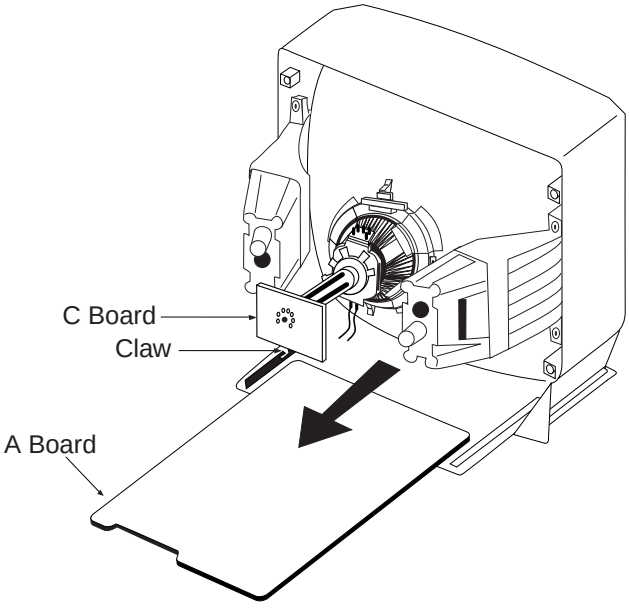
If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Direct Response Center at 1-800-222-SONY (7669) (U.S. customers only) or (416) 499-SONY (7669) (Canadian customers only).

SECTION 2
DISASSEMBLY

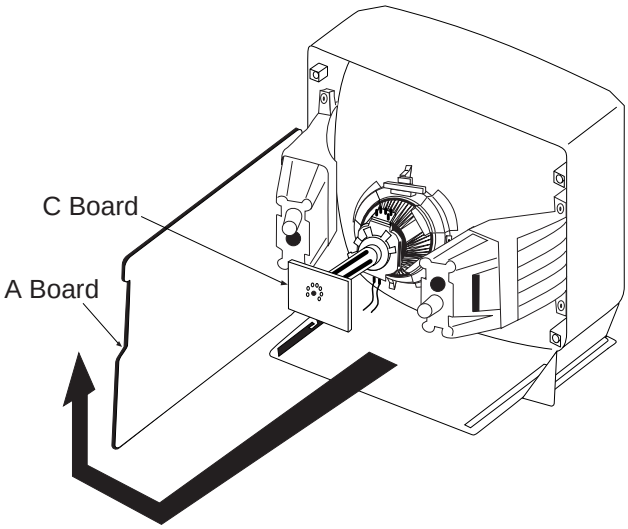
2-1. REAR COVER REMOVAL



2-2. A BOARD REMOVAL



2-3. SERVICE POSITION

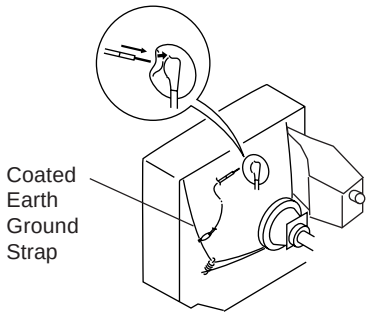


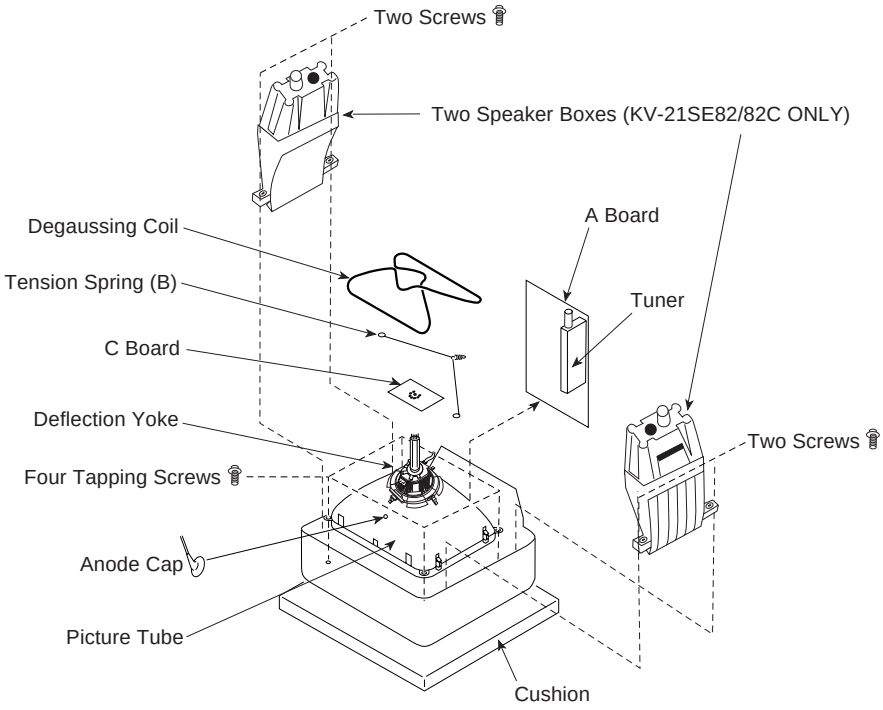
2-4. PICTURE TUBE REMOVAL

WARNING:
BEFORE REMOVING
THE ANODE CAP

High voltage remains in the CRT even after the power is disconnected.

To avoid electric shock, discharge CRT ***before*** attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.



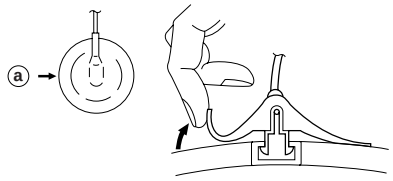


ANODE CAP REMOVAL

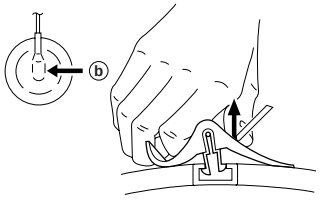
WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electrical shock, discharge the CRT **before** attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.

NOTE: After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

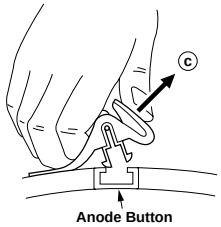
REMOVAL PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by arrow ⓐ.



② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ⓑ.



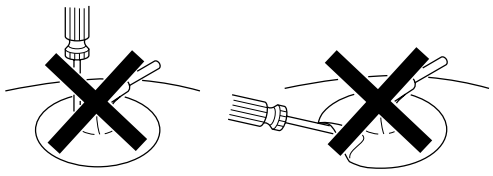
③ When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow ⓒ.

HOW TO HANDLE AN ANODE CAP

① Do not use sharp objects which may cause damage to the surface of the anode cap.

② To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.

③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



SECTION 3
SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or when a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Set the controls and switch as follows unless otherwise noted.

PICTURE control..... Normal
BRIGHTNESS control..... Normal

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G2)
5. White Balance

Note: Test equipment required:

- Color bar pattern generator
- Degausser
- DC power supply
- Digital multimeter

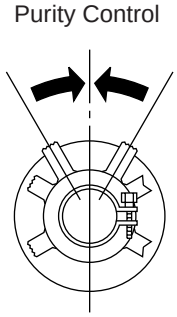
3-1. BEAM LANDING

Before beginning adjustment procedure:

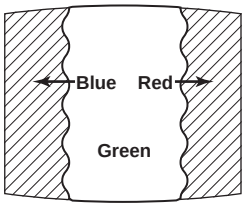
1. Degauss the entire screen.
2. Feed in the white pattern signal.

Adjustment Procedure

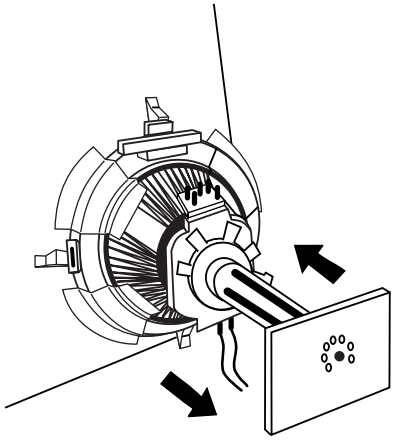
1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw and set the purity control to the center as shown below.



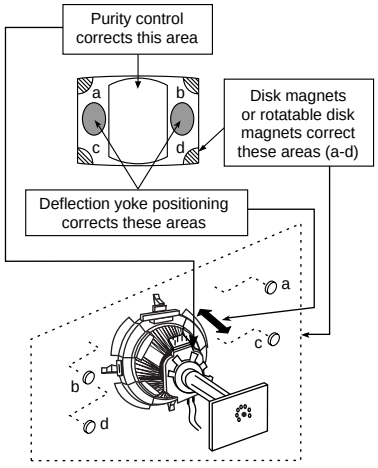
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward and adjust the purity control so that green is in the center and red and blue are at the sides evenly.



5. Move the deflection yoke forward and adjust so that the entire screen becomes green.



6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. If landing at the corner is not right, adjust by using the disk magnets.



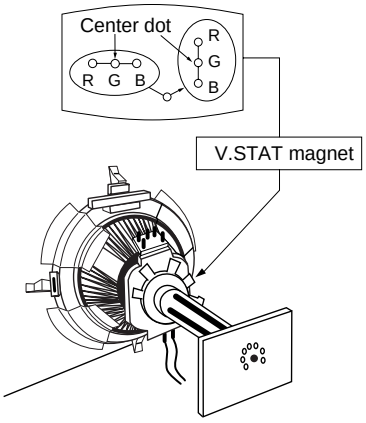
3-2. CONVERGENCE

Before starting convergence adjustments:

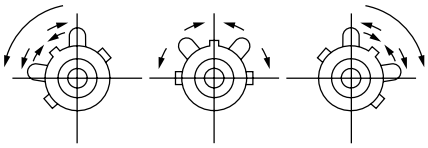
1. Perform FOCUS, V.LIN AND V.SIZE adjustments.
2. Set BRIGHTNESS control to minimum.
3. Feed in dot pattern.

Vertical Static Convergence

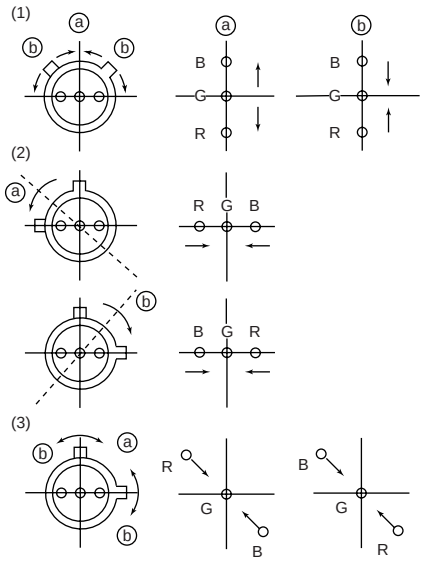
1. Adjust V.STAT magnet to converge red, green and blue dots in the center of the screen (vertical movement).



2. Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.

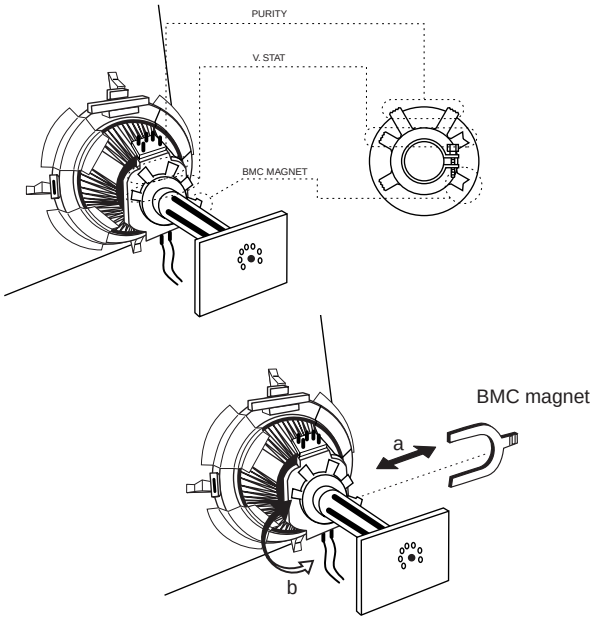


When the V.STAT magnet is moved in the direction of arrows ⓐ and ⓑ, red, green, and blue dots move as shown below:



If the blue dot does not converge with the red and green dots, perform the following:

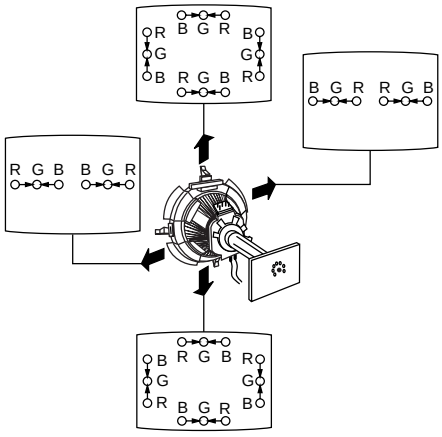
1. Move BMC magnet (a) to correct insufficient H. Static convergence.
2. Rotate BMC magnet (b) to correct insufficient V. Static convergence.
3. In either case, repeat Beam Landing Adjustment.



Dynamic Convergence Adjustment

Before performing this adjustment, perform Horizontal and Vertical Static Convergence Adjustment.

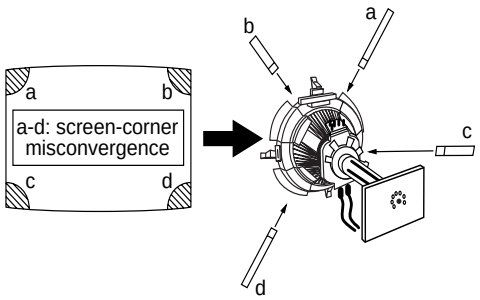
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence, as shown below:



4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

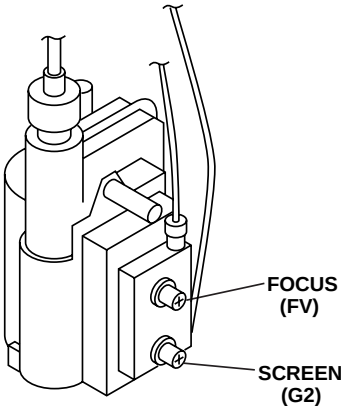
Screen-Corner Convergence

1. Affix a permalloy assembly corresponding to the misconverged areas.



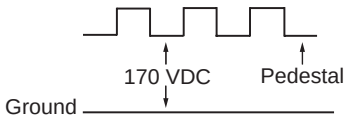
3-3. FOCUS

1. Adjust FOCUS control for best picture.



3-4. SCREEN (G2)

1. Input a dots pattern.
2. Set the PICTURE and BRIGHTNESS controls at minimum and COLOR control at normal.
3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown below so that voltages on the red, green, and blue cathodes are 170 VDC.



4. Observe the screen and adjust SCREEN (G2) VR to obtain the faintly visible background of dot signal.

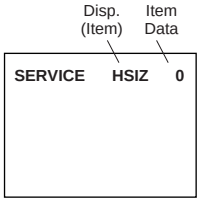
3-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

Service Mode Procedure

1. Standby mode (power off).
2. [Display] ➡ Channel [5] ➡ Sound volume [+] ➡ Power ON on the Remote Commander (press each button within a second).

Service Adjustment Mode In

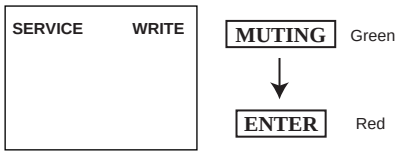
1. The CRT displays the item being adjusted.



2. Press [1] or [4] on the Remote Commander to select the item.
3. Press [3] or [6] on the Remote Commander to change the data.
4. Press [MUTING] then [ENTER] to save into the memory.

Service Adjustment Mode Memory

Turn set off then on to exit service adjustment mode.



3-6. WHITE BALANCE ADJUSTMENTS

1. Input an entire white signal.
2. Set to Service Adjustment Mode.
3. Set DCOL to “0”.
4. Set the PICTURE and BRIGHTNESS to minimum.
5. Adjust with SBRT if necessary.
6. Select GCUT and BCUT with [1] and [4] .
7. Adjust with [3] and [6] for the best white balance.
8. Set PICTURE and BRIGHTNESS to maximum.
9. Select GDRV and BDRV with [1] and [4] .
10. Adjust with [3] and [6] for the best white balance.
11. Reset DCOL to “1”.
12. To write into memory, press [MUTING] then [ENTER] .

SECTION 4
SAFETY RELATED ADJUSTMENTS

4-1. ⋈ R582 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components which are marked with ◪ on the schematic diagram.

DY, C511, C574, C575, D572, D573, D574, R582, R583, R584, R585, R586, R578, R625, R626, R634, R635, T504, IC301, IC521, IC602

Preparation Before Confirmation

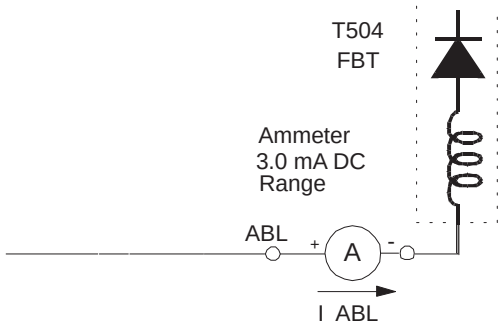
1. Turn the POWER switch ON. Input an entirely white signal and set the PICTURE and BRIGHTNESS controls to maximum.
2. Confirm that the voltage between C574 (+) and ground is more than 99.8 VDC when the set is operating normally with 120.0 ± 2.0 VAC (or 120-220±VAC for KV-21MB42C/42M/42P/ME42/42C/SB42C/42M/ SE42/42C/82/82C).

Hold-down Operation Confirmation

1. Connect the current meter between Pin 11 of the FBT (T504) and the PCB land where Pin 11 would normally attach. (See Figure 1 on the following page.)
2. Input a dot signal and set PICTURE and BRIGHTNESS to minimum: IABL = 95 + 100/-95μA.
3. Confirm the voltage of A Board TP-600 is 117.0 ± 0.3 VDC.
4. Connect the digital voltmeter and the DC power supply via diode 1SS119 to C574 (+) and ground (See Figure 1 on the following page).
5. Increase the DC power voltage gradually until the picture blanks out.
6. Read the digital voltmeter indication.
7. Turn DC power source off immediately: (standard: less than or equal to 127.3 VDC).
8. Input a white signal and set PICTURE and BRIGHTNESS to maximum: (standard: less than or equal to 127.3 VDC).
9. Repeat steps 4 to 7.

Hold-down Readjustment

If the setting indicated in step 2 of Hold-down Operation Confirmation cannot be met, readjustment should be performed by altering the resistance value of R582, a component marked with ⋈ .



4-2. B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

Note: The following adjustments should always be performed when replacing the following components, which are marked with ◪ on the schematic diagram.

IC001, IC602, R030, R626, R632, R633, R635, R636, R637, R638, R639

1. Supply 120.0 ± 2.0 VAC (or 120-220±VAC for KV-21MB42C/42M/42P/ME42/42C/SB42C/42M/SE42/ 42C/82/82C) to the set with a variable auto transformer.
2. Input a dot signal.
3. Set the PICTURE and BRIGHTNESS controls to minimum.
4. Set to Service Adjustment Mode.
5. Select PADJ with [1] and [4].
6. Adjust with [6] to the 0 level.
7. Confirm the voltage of A board TP-600 is less than 125 VDC.
8. If step 7 is not satisifed, replace the components and repeat the above steps.
9. Supply 120.0 ± 2.0 VAC (or 120-220±VAC for KV-21MB42C/42M/42P/ME42/42C/SB42C/42M/SE42/ 42C/82/82C) to the set with a variable auto transformer.
10. Adjust with [3] and [6] for 117.0 ± .3 VDC.
11. Press [MUTING] then [ENTER] to save into the memory.

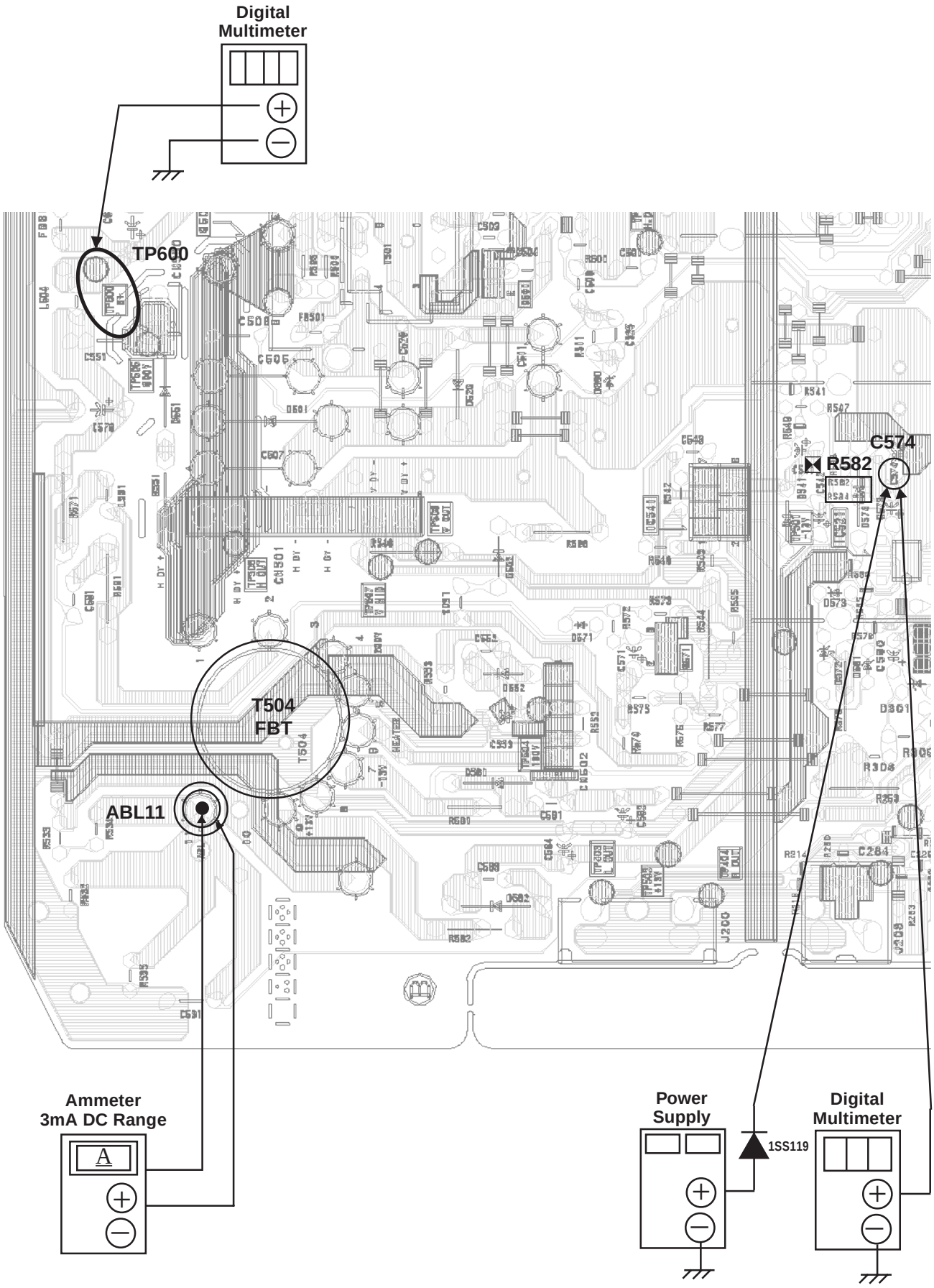

Digital
Multimeter
TP600
C574
R582
T504
FBT
ABL11
Ammeter
3mA DC Range
A
Power
Supply
1SS119
Digital
Multimeter

Figure 1

SECTION 5
CIRCUIT ADJUSTMENTS

Electrical Adjustment by Remote Commander

Use the Remote Commander (RM-Y155) to perform the circuit adjustments in this section.

NOTE: Test Equipment Required:

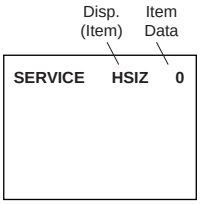
- Pattern generator
- Frequency counter
- Digital multimeter
- Audio oscillator

5-1. Setting the Service Adjustment Mode

1. Standby mode (power off).
2. [Display] ➡ Channel [5] ➡ Sound volume [+] ➡ Power ON on the Remote Commander (press each button within a second).

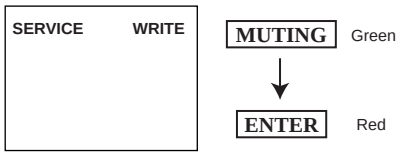
Service Adjustment Mode On

1. The CRT displays the item being adjusted.

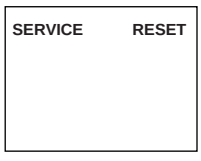


2. Press [1] or [4] on the Remote Commander to select an item.
3. Press [3] or [6] on the Remote Commander to change the data.
4. Press [MUTING] then [ENTER] to save into the memory.

Service Adjustment Mode Memory



1. Press [8] then [ENTER] on the Remote Commander to initialize.



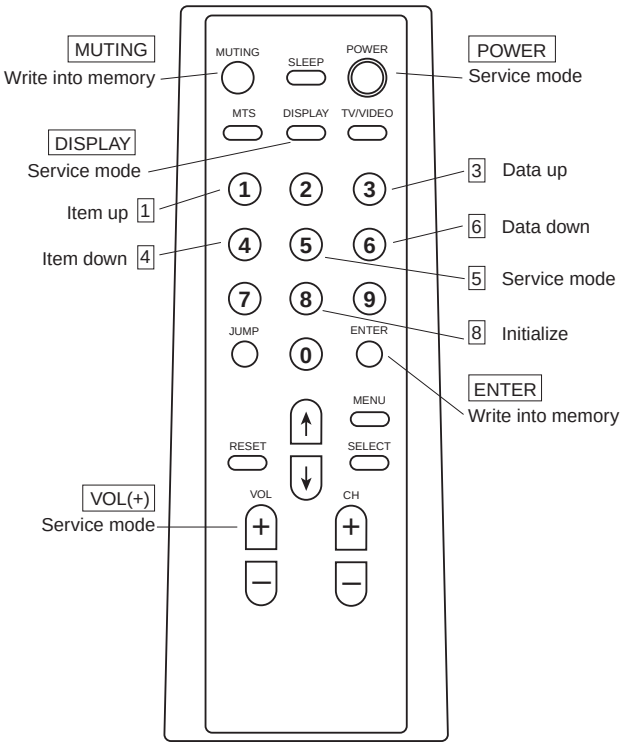
Carry out step 1 when adjusting IDs 0–4 and when replacing and adjusting IC003.

2. Turn set off then on to exit service adjustment mode.

5-2. Memory Write Confirmation Method

1. After adjustment, remove the power plug from the AC outlet, then plug it in again.
2. Turn the power switch ON and set to service mode.
3. Call the adjusted items again to confirm they were adjusted.

5-3. Adjust Buttons and Indicators



RM-Y155

Adjustment Items

NO.	ITEM	FUNCTION	DATA RANGE	INITIAL DATA	AVERAGE DATA
1	HSIZ	HORIZONTAL SIZE ADJ.	0-63	31	31
2	HPOS	HORIZONTAL POS. ADJ.	0-63	31	20
3	VBOW	VRT LINE BOWING ADJ.	0-15	7	6
4	VANG	VRT LINE BOW SLANT ADJ.	0-15	7	6
5	TRAP	HORIZ. TRAPEZOID ADJ.	0-15	7	15
6	PAMP	HORIZ. PIN DISTORTION ADJ.	0-63	31	31
7	CPIN	SAME AS PAMP-SCRN TP/BTM	0-63	31	31
8	VSIZ	VERTICAL SIZE ADJ.	0-63	31	37
9	VPOS	VERTICAL POSITION ADJ.	0-63	31	38
10	VLIN	VERTICAL LINEARITY ADJ.	0-15	7	7
11	SCOR	VERTICAL “S” CORRECTION ADJ.	0-15	7	7
12	VZOM	16:9 CRT Z MODE ON/OFF	0, 1	0	0
13	EHT	VRT HI-VOLT. CORRECTION	0-15	7	4
14	ASP	ASPECT RATIO CONTROL	0-63	63	47
15	SCRL	16:9 CRT Z MODE TRANS SCROLL	0-63	31	31
16	HBLK	HORIZONTAL BLANKING ON/OFF	0, 1	0	1
17	LBLK	LEFT BLANKING ADJ.	0-15	7	15
18	RBLK	RIGHT BLANKING ADJ.	0-15	7	3
19	VUSN	V SAW WAVEFORM COMPRESS	0, 1	0	0
20	HDW	H. DRIVE PULSE WIDTH	0, 1	0	0
21	EWDC	“PARABOLA” EW/DC ADJ.	0, 1	0	0
22	LVLN	LOWER SCREEN BTM VRT LIN ADJ.	0-15	0	0
23	UVLN	UPPER SCREEN BTM VRT LIN ADJ.	0-15	0	0
24	RDRV	R OUTPUT DRIVE CONTROL	0-63	31	27
25	GDRV	G OUTPUT DRIVE CONTROL	0-63	31	22
26	BDRV	B OUTPUT DRIVE CONTROL	0-63	31	22
27	RCUT	R OUTPUT CUTOFF CONTROL	0-15	7	9
28	GCUT	G OUTPUT CUTOFF CONTROL	0-15	7	4
29	BCUT	B OUTPUT CUTOFF CONTROL	0-15	7	4
30	DCOL	DYNAMIC COLOR ON/OFF	0, 1	0	0
31	SHUE	SUB HUE	0-31	14	18
32	SCOL	SUB COLOR	0-31	14	18
33	SBRT	SUB BRIGHTNESS	0-31	14	10
34	RON	R OUTPUT ON/OFF	0, 1	0	1
35	GON	G OUTPUT ON/OFF	0, 1	0	1
36	BON	B OUTPUT ON/OFF	0, 1	0	1
37	AXPL	AXIS PAL	0, 1	0	0
38	AXNT	AXIS NTSC	0, 1	0	0
39	CBPF	CHROMA BPF ON/OFF	0, 1	0	1
40	CTRP	Y TRAP FILTER ON/OFF	0, 1	0	1
41	COFF	COLOR ON/OFF	0, 1	0	0
42	KOFF	SET COLOR KILLER	0, 1	0	0
43	SSHP	SUB SHARPNESS	0-15	8	6
44	SHPF	SHARPNESS CIRCUIT F0	0, 1	0/0 *2	0/0 *2
45	PREL	PRE/OVR SHOOT SWITCHING	0, 1	0	1
46	Y-DC	DC TRANS RATIO SWITCHING	0, 1	0	1
47	GAMM	GAMMA CORRECTION AMNT	0-3	0	0
48	ABLM	ABL MODE SWITCHING	0, 1	1	1
49	VTH	ABL CD VHT SWITCHING	0, 1	0	1
50	YDEL	Y DELAY TIME CONTROL	0-15	7	7
51	NCOL	NO COLOR ID	0, 1	0	1
52	FSC	FSC OUT ON/OFF	0, 1	0	1
53	K-ID	KILLER ID CONTROL SW	0, 1	0	0
54	HOSC	H VCO OSCILLATION FREQ	0-15	7	7
55	VSS	V SYNC SLICE LEVEL	0, 1	0	0
56	HSS	H SYNC SLICE LEVEL	0, 1	0	0
57	HMSK	H SYNC MASK WIDTH	0, 1	0	1
58	VTMS	SELECT SIGNAL VTIM PIN	0-3	0	0
59	CDMD	V CNT DWN MODE SWITCHING	0-3	0/1 *2	0/1 *2
60	AFC	AFC LOOP GAIN SWITCHING	0-3	0/0 *2	0/0 *2
61	FIFR	FIELD FREQUENCY	0-3	0	3
62	SBAS	SUB BASS	0-15	7	8
63	STRE		0-15	7	9

NO.	ITEM	FUNCTION	DATA RANGE	INITIAL DATA	AVERAGE DATA
64	SBAL	SUB BALANCE	0-31	14	13
65	DISP	O.S.D DISPLAY POSITION	0-127	0	5
66	PADJ	POWER ADJUSTMENT	0-63	3	42
67	HCHM		0-255	69	69
68	HCLM		0-255	16	16
69	HCHS		0-255	69	69
70	HCLS		0-255	16	16
71	PVCH		0-1	0	0
72	PVON		0-1	0	1
73	PVLN		0-31	17	17
74	PVSB		0-255	64	64
75	PVLV		0-255	130	130
76	ID1	ID1	0-255	3	See ID Map below
77	ID2	ID2	0-255	11	See ID Map below
78	ID3	ID3	0-255	1	See ID Map below
79	ID4	ID4	0-255	23	See ID Map below
80	ID5	ID5	0-255	0	See ID Map below
81	ID6	ID6	0-255	0	See ID Map below
82	ID7	ID7	0-255	64	See ID Map below

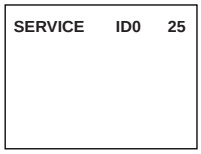
*2: TV/VIDEO

Notes:

No. 1–82 show the order that each adjustment mode may be selected while in service mode.

Data Range shows the range of possible settings for each adjustment mode.

Initial Data shows the standard settings for each adjustment mode.



Feature ID Map

MODEL	DEST.	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
KV-20M42	US	25	3	0	227	3	1	0	0
KV-20M42	CND	89	3	0	147	3	1	0	0
KV-20S42	US	25	3	1	227	3	1	0	0
KV-20S42	CND	89	3	1	147	3	1	0	0
KV-20S43	US	25	3	1	227	3	1	0	0
KV-20S43	CND	89	3	1	147	3	1	0	0
KV-21MB42C	E	17	3	0	195	115	1	0	0
KV-21MB42M	MX	17	3	0	195	115	1	0	0
KV-21MB42P	E	17	3	0	195	115	1	0	0
KV-21ME42	E	17	3	0	195	115	1	0	0
KV-21ME42C	E	17	3	0	195	115	1	0	0
KV-21SB42C	E	17	3	1	195	115	1	0	0
KV-21SB42M	MX	17	3	1	195	115	1	0	0
KV-21SE42	E	17	3	1	195	115	1	0	0
KV-21SE42C	E	17	3	1	195	115	1	0	0
KV-21SE82	E	17	3	159	195	123	3	0	0
KV-21SE82C	E	17	3	159	195	123	3	0	0

5-4. A BOARD ADJUSTMENTS

H. Frequency Adjustment

1. Input a monoscope signal.
2. Set to Service Adjustment Mode.
3. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE).
4. Select the item of AFC, set to 3 level (free run).
5. Check H. Frequency for the 15735 ± 200 Hz.
6. Select the AFC item again and adjust level to 0.
7. Press [MUTING] then [ENTER] to save into the memory.

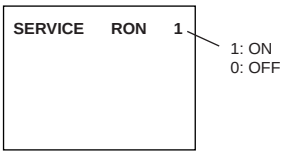
V. Frequency Adustment

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter across TP-508 or CN501 VDY (+) pin ⑥ connector and ground.
4. Check that V. Frequency shows 60 ± 2 Hz.

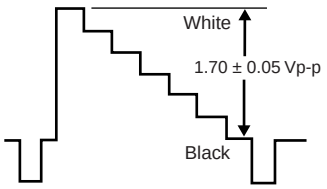
Sub Contrast Adjustment (RDRV)

1. Input a color-bar signal.
2. Set the red color.
3. Set to Service Adjustment Mode.
4. Select the item DCOL level to 0.
5. Set the conditions as follows:

PICTURE:	MAX
COLOR:	MIN
BRIGHT:	CENTER
R ON:	ON (1)
G ON:	OFF (0)
B ON:	OFF (0)



6. Connect an oscilloscope probe to CN301 pin ② (R OUT) and ground.
7. Select RDRV with [1] and [4] .
8. Adjust with [3] and [6] for 1.70 ± 0.05 Vp-p

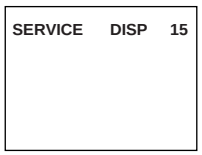


9. Reset the item DCOL to 1.
10. Press [MUTING] then [ENTER] to save into the memory.
11. Return the following back to normal after adjustment.

PICTURE:	MAX
COLOR:	CENTER
BRIGHT:	CENTER
R ON:	ON (1)
G ON:	OFF (0)
B ON:	OFF (0)

Display Position Adjustment (DISP)

1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select DISP with [1] and [4] .
4. Adjust with [3] and [6] to adjust characters to the center.
5. Press [MUTING] then [ENTER] to save into the memory.
6. Check to see if the text is displayed on the screen.

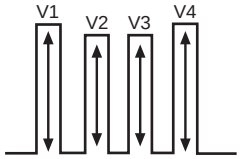


Sub Bright Adjustment (SBRT)

1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with [1] and [4] .
5. Adjust with [3] and [6] to obtain a faintly visible crosshatch.
6. Press [MUTING] then [ENTER] to save into the memory.

Sub Hue, Sub Color Adjustment (SHUE, SCOL)

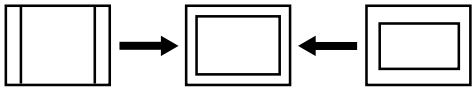
1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select the DCOL item and set the value to 0.
4. Connect an oscilloscope probe to CN301 Pin ④ (BLUE OUT) and ground.
5. Select SHUE and SCOL with [1] and [4] .
6. Adjust with [3] and [6] for the V1 = V4 ± 0.2 Vp-p (SCOL) and V2 = V3 ± 0.2 Vp-p (SHUE).



7. Reset the DCOL level to 1.
8. Press [MUTING] then [ENTER] to save into the memory.

V. Size Adjustment (VSIZ)

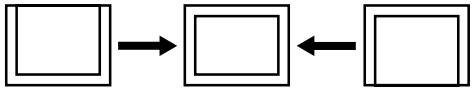
1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Select the VSIZ item with 1 and 4 .
4. Adjust value of VPOS with 3 and 6 for the best vertical center.



5. Press MUTING then ENTER to save into the memory.

V. Center Adjustment (VPOS)

1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Select the VPOS item with 1 and 4 .
4. Adjust value of VPOS with 3 and 6 for the best vertical center.

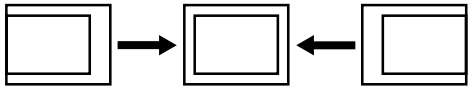


5. Press MUTING then ENTER to save into the memory.

H. Center Adjustment (HPOS)

Perform this adjustment after checking H. Frequency.

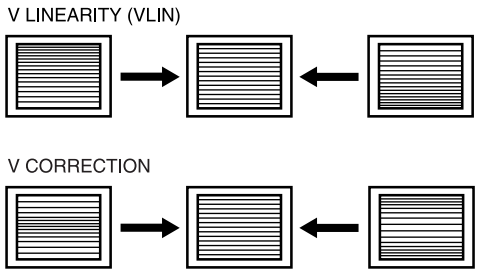
1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Select the HPOS item with 1 and 4 .
4. Adjust the value of HPOS with 3 and 6 for the best horizontal center.



5. Press MUTING then ENTER to save into the memory.

V. Linearity (VLIN), V Correction

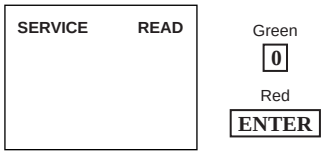
1. Input a crosshatch signal.
2. V. correction is automatically adjusted from the circuit and should satisfy the conditions below.



Service Adjustment Mode Memory

1. Change the value of the DCOL item to 1.
2. After completing all adjustments, press 0 then ENTER .

Read From Memory



NOTES:

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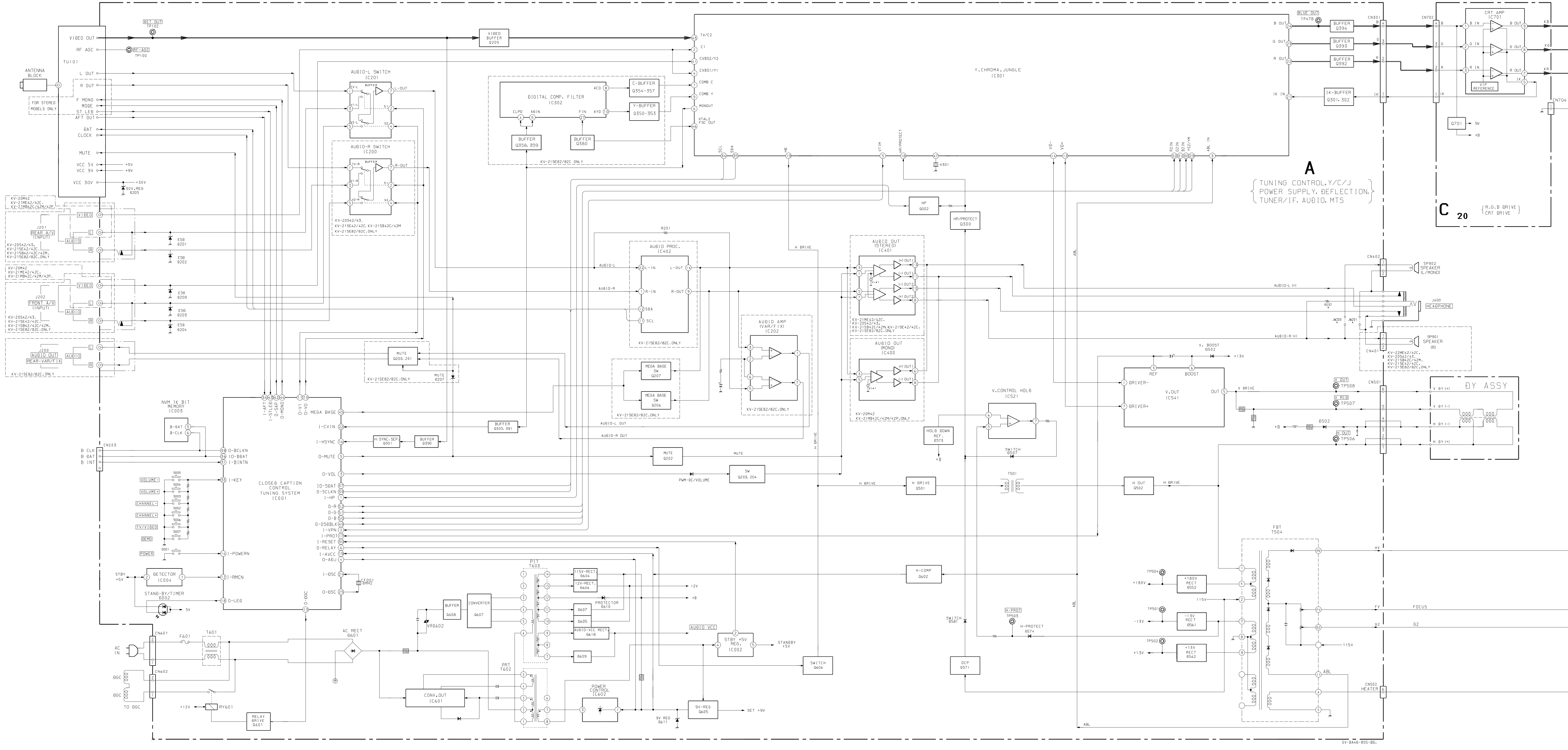
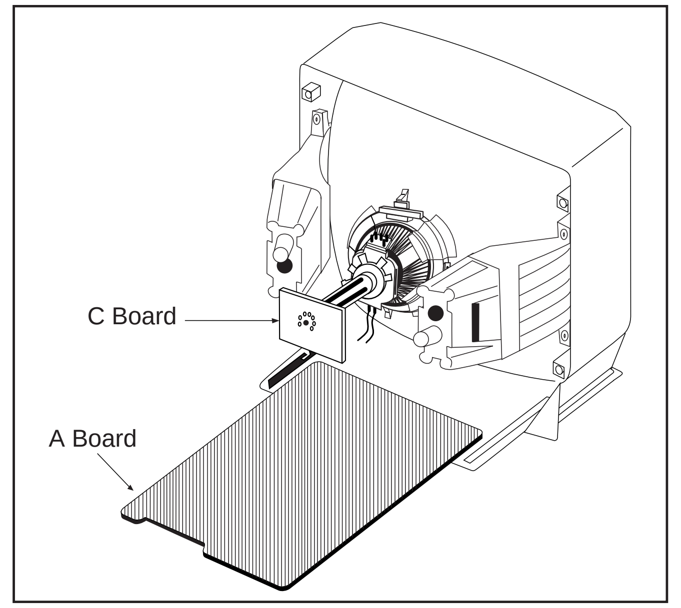
NOTES:

SECTION 6
DIAGRAMS

6.1 BLOCK DIAGRAM



6.2 CIRCUIT BOARD LOCATIONS



6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are 50V unless otherwise specified.
- Indication of resistance, which does not have one for rating electrical power, is as follows:
  Pitch: 5mm
  Rating electrical power 1/4W (CHIP: 1/10W)
- All resistors are in ohms.
  KΩ = 1000Ω   MΩ = 1000KΩ
- (symbol) : nonflammable resistor
- (symbol) : fusible resistor
- △ : internal component
- ▭ : panel designation and adjustment for repair
- ⊥ : earth-ground
- (symbol) : earth-chassis
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⧓ and repeat the adjustment until the specified value is achieved (refer to Safety Related Adjustments on page 17).

- When replacing parts shown in the table below, be sure to perform the related adjustments.

Part Replaced (◪)	Adjustment (⧓)
DY, C511, C574, C575, D572, D573, D574, R582, R583, R584, R585, R586, R578, R625, R626, R634, R635, T504, IC301, IC521, IC602	HV HOLD-DOWN (R582)
IC001, IC602, R030, R626, R632, R633, R635, R636, R637, R638, R639	B+ VOLTAGE CONFIRMATION

- All voltages are in Volts
- Voltage is DC with respect to ground unless otherwise noted.
- Readings are taken with a 10MΩ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.
- * : cannot be measured
- ▬▬ : B + Line
- ‒ ‒ ‒ : B – Line
- ⇨ : Signal path

Reference Information

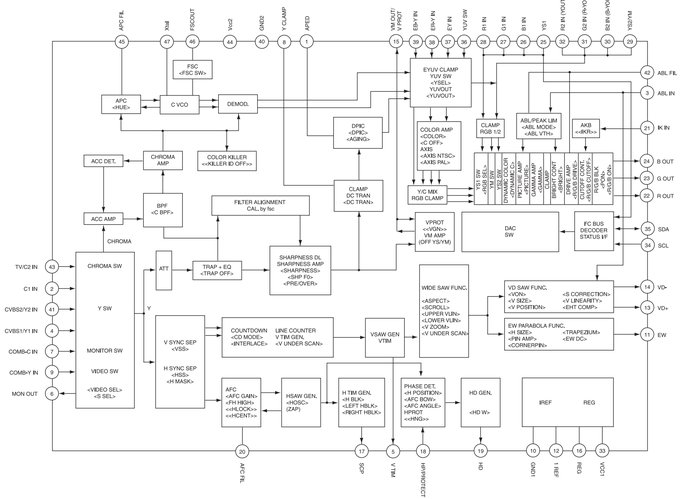
RESISTOR	:	RN	METAL FILM
	:	RC	SOLID
	:	FPRD	NON FLAMMABLE CARBON
	:	FUSE	NON FLAMMABLE FUSIBLE
	:	RW	NON FLAMMABLE WIREWOUND
	:	RS	NON FLAMMABLE METAL OXIDE
	:	RB	NON FLAMMABLE CEMENT
	:	※	ADJUSTMENT RESISTOR
COIL	:	LF-8L	MICRO INDUCTOR
CAPACITOR	:	TA	TANTALUM
	:	PS	STYROL
	:	PP	POLYPROPYLENE
	:	PT	MYLAR
	:	MPS	METALIZED POLYESTER
	:	MPP	METALIZED POLYPROPYLENE
	:	ALB	BIPOLAR
	:	ALT	HIGH TEMPERATURE
	:	ALR	HIGH RIPPLE

Note:

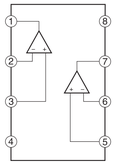
The components identified by shading and ⚠ mark are critical for safety. Replace only with the part number specified.
The symbol (fuse symbol) (displayed on component side of the circuit board) indicates fast operating fuse. Replace only with fuse of the same rating as marked.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.
Le symbole (fuse symbol) indique une fusible a action rapide. Doit etre remplacee par une fusible de meme yaleur, comme marque.

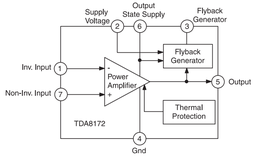
A BOARD: IC301 CXA2061S



A BOARD: IC521 NJM4558M-TE2



A BOARD: IC541 TDA8172

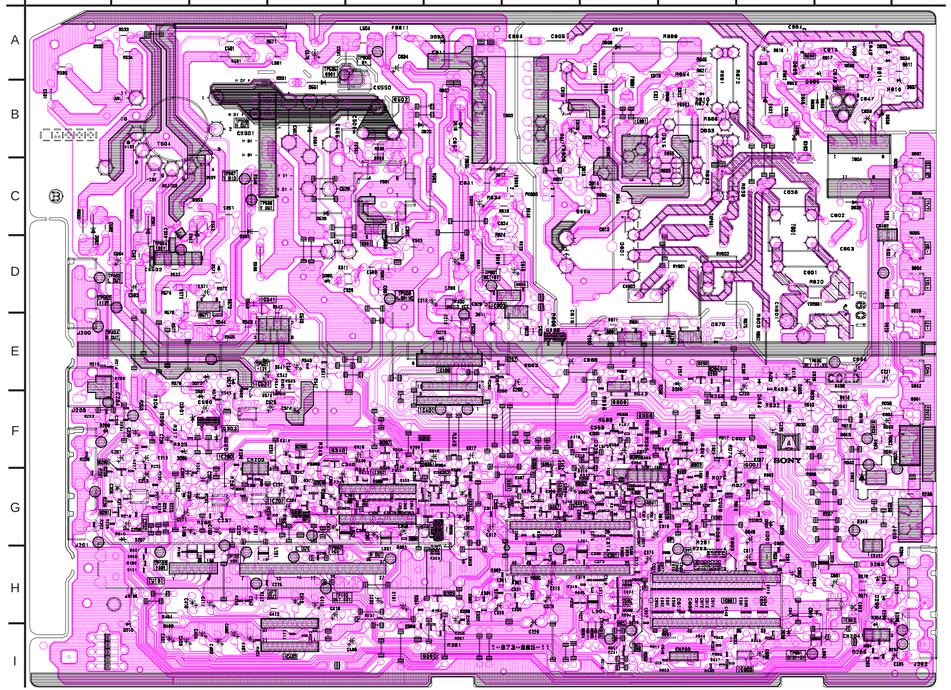


A BOARD LOCATION LIST

DIODE					TRANSISTOR			
D001	F-9	D520	C-4	D635	A-11	Q001	F-9	Q358	G-4
D002	F-10	D541	E-3	D636	C-10	Q002	F-8	Q359	G-8
D003	H-7	D552	C-2	D637	A-11	Q003	E-8	Q380	G-8
D004	H-7	D561	C-2	D638	C-10	Q200	G-3	Q390	F-8
D201	F-2	D562	C-1	D650	H-6	Q201	G-1	Q391	F-6
D202	G-2	D571	C-2	D653	A-5	Q202	E-6	Q392	G-9
D203	H-11	D572	E-2	D670	D-9	Q203	E-9	Q393	F-8
D204	H-11	D573	E-3	IC		Q205	G-6	Q394	G-8
D205	D-5	D574	E-3	IC001	G-9	Q206	F-4	Q501	C-5
D206	E-9	D581	E-2	IC002	H-10	Q207	F-5	Q502	B-5
D207	G-2	D601	C-7	IC003	H-9	Q252	G-9	Q556	E-8
D208	E-8	D602	D-8	IC004	F-11	Q300	F-8	Q571	D-2
D209	G-2	D603	B-8	IC200	G-3	Q301	F-7	Q601	D-7
D210	H-2	D609	B-6	IC201	F-4	Q302	F-7	Q602	F-8
D215	E-6	D611	D-6	IC202	G-2	Q303	F-3	Q605	D-6
D280	H-11	D613	C-7	IC301	G-7	Q305	F-8	Q606	E-8
D301	F-2	D614	C-7	IC302	G-5	Q340	F-4	Q607	B-10
D302	F-7	D615	C-7	IC400	E-5	Q350	G-6	Q608	D-8
D310	F-8	D616	B-6	IC401	F-5	Q351	G-6	Q650	G-6
D311	F-8	D617	C-6	IC402	I-4	Q352	G-6	Q670	E-9
D320	F-7	D620	B-5	IC521	E-3	Q353	G-6		
D403	E-10	D631	C-9	IC541	D-3	Q354	F-7		
D434	E-9	D632	B-9	IC601	B-8	Q355	G-7		
D501	B-4	D633	B-10	IC602	D-6	Q356	G-7		

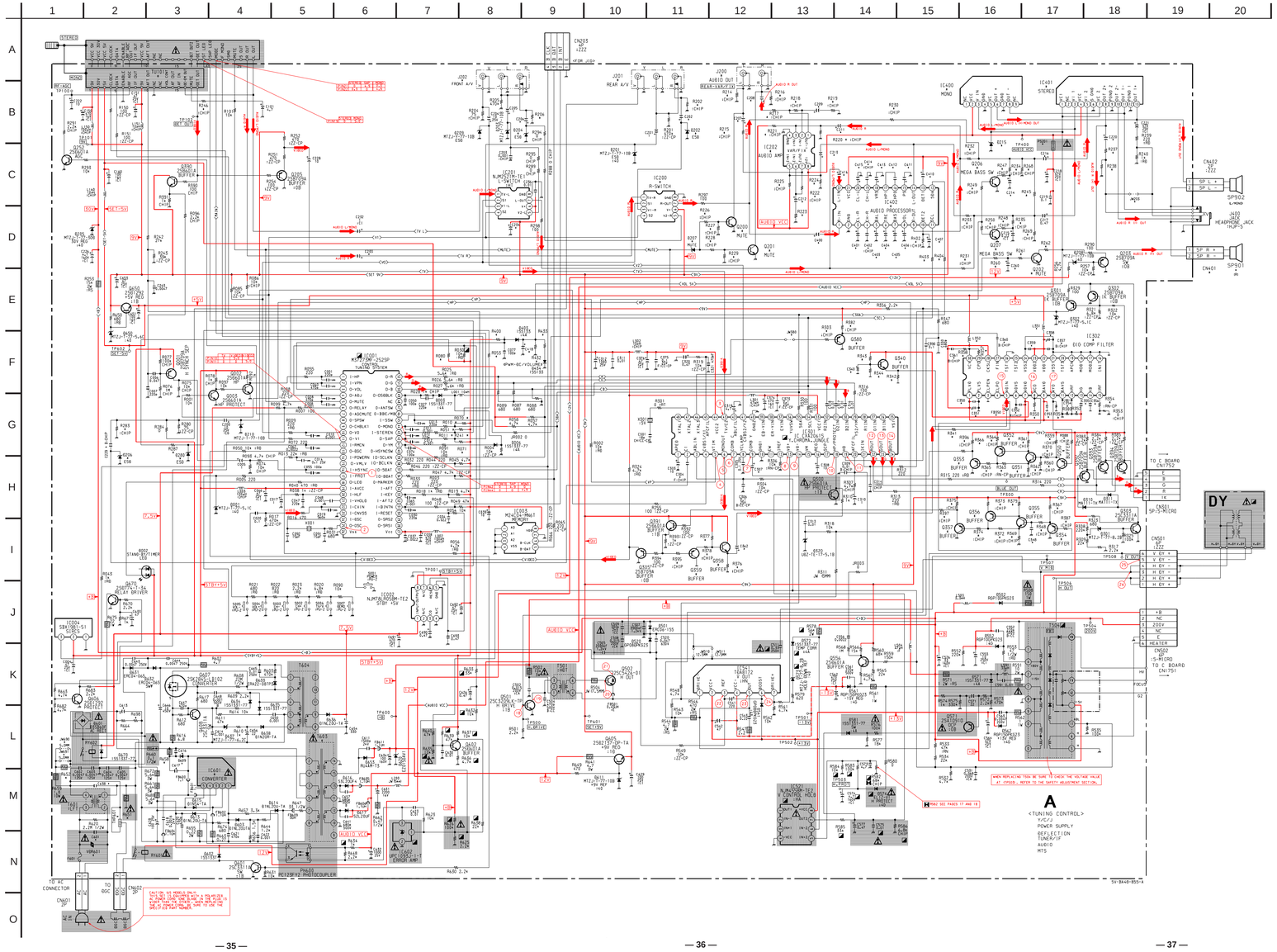
NOTE:
Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

A [TUNING CONTROL, Y/C/J, POWER SUPPLY, DEFLECTION, TUNER/IF, AUDIO MTS]

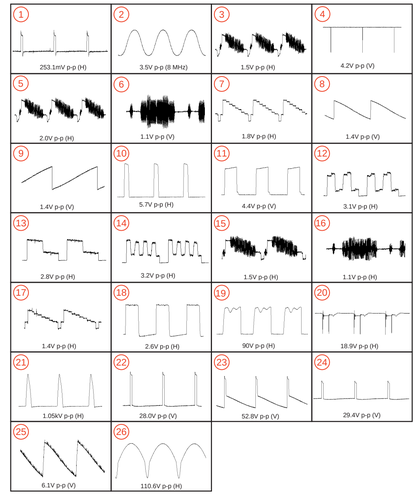


A Board ➡

A BOARD SCHEMATIC DIAGRAM



A BOARD WAVEFORMS



A BOARD IC VOLTAGE LIST

IC001	
PIN	VOLT
1	9
2	4.9
3	5
4	2.0
5	0
6	.1
7	NC
8	NC
9	NC
10	0
11	.1
12	4.9
13	0
14	4.9
15	4.9
16	-.1
17	-.3
18	4.9
19	4.9
20	1.8
21	0
22	2.2
23	0
24	2.2
25	2.3
26	GND
27	4.9
28	NC
29	NC
30	4.9
31	4.9
32	0
33	4.9
34	2.6
35	0
36	4.9
37	4.9
38	4.9
39	4.8
40	0
41	0
42	.1
43	4.9
44	.1
45	4.9
46	4.9
47	0
48	0
49	0
50	0
51	0
52	0

IC002	
PIN	VOLT
1	7.0
2	GND
3	5.4
4	GND
5	GND
6	4.9
7	GND
8	4.9
IC003	
PIN	VOLT
1	GND
2	GND
3	GND
4	GND
5	4.8
6	4.8
7	GND
8	5.0
IC004	
PIN	VOLT
1	4.9
2	4.9
3	0
4	6.1
5	6.1
6	9.1
7	5.3
8	GND
IC200	
PIN	VOLT
1	5.9
2	2
3	6.1
4	2
5	6.1
6	9.1
7	5.3
8	GND
IC201	
PIN	VOLT
1	5.9
2	2
3	6.1
4	2
5	6.1
6	9.1
7	5.3
8	GND
IC202	
PIN	VOLT
1	6.8
2	6.8
3	6.8
4	GND
5	6.8
6	6.8
7	6.8
8	13.6

IC301	
PIN	VOLT
1	3.4
2	5.2
3	1.3
4	5.3
5	4.9
6	4.5
7	2.0
8	5.1
9	0
10	GND
11	3.8
12	2.4
13	3.5
14	3.5
15	5.8
16	7.6
17	7
18	.8
19	3.0
20	2.6
21	1.0
22	1.5
23	1.5
24	1.5
25	1
26	4.4
27	4.4
28	4.4
29	0
30	4.6
31	4.6
32	4.6
33	0
34	4.9
35	4.9
36	1
37	4.4
38	5.1
39	5.1
40	GND
41	5.3
42	7.2
43	5.5
44	9.1
45	5.3
46	4.8
47	1.9
48	0

IC302	
PIN	VOLT
1	5.1
2	0
3	0
4	5.0
5	1.3
6	0
7	5.1
8	1.1
9	5.1
10	.8
11	0
12	2.0
13	2.8
14	1.0
15	2.1
16	0
17	0
18	0
19	0
20	0
21	0
22	5.1
23	5.0
24	0
25	2.4
26	0
27	2.5
28	5.1
29	2.3
30	2.3
IC400	
PIN	VOLT
1	NC
2	12.6
3	2.4
4	GND
5	0.8
6	6.0
7	GND
8	6.0
9	NC
IC401	
PIN	VOLT
1	.8
2	NC
3	2.4
4	13.6
5	2.4

6	GND
7	.8
8	6.5
9	GND
10	6.5
11	6.5
12	GND
IC402	
PIN	VOLT
1	4.5
2	GND
3	4.5
4	4.5
5	4.6
6	4.5
7	4.5
8	4.2
9	4.5
10	1.8
11	4.9
12	4.9
13	1.6
14	4.5
15	4.5
16	4.5
17	4.5
18	4.5
IC521	
PIN	VOLT
1	12.5
2	7
3	.9
4	GND
5	8.6
6	9.8
7	1.3
8	12.9
IC541	
PIN	VOLT
1	2.6
2	12.9
3	-11.1
4	-12.9
5	0
6	13.6
7	2.4

IC601	
PIN	VOLT
1	-55.3
2	-57.2
3	94.8
4	-41.6
5	-57.1
IC602	
PIN	VOLT
1	2.5
2	GND
3	10.9

All voltages are in V

A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q001	4.9	0.7	4.8
Q002	.4	0	.9
Q003	.4	0	.9
Q200	.7	0	GND
Q201	.7	0	GND
Q202	1.4	.7	GND
Q203	1.7	GND	.8
Q204	0	.5	GND
Q205	4.5	GND	5.2
Q206	4.9	0	3.9
Q207	4.9	0	3.9
Q252	0	7.4	0
Q300	.6	.8	GND
Q301	3.6	1.0	3.9
Q302	3.6	GND	3.9
Q303	.7	.1	0
Q305	3.9	GND	4.4
Q340	1.2	5.0	1.3
Q350	.8	GND	1.5
Q351	1.5	8.4	.9
Q352	8.4	1.2	9.0
Q353	1.2	GND	1.8
Q354	1.1	GND	1.7
Q355	1.7	8.4	1.1
Q356	8.4	1.4	9.0
Q357	1.4	GND	2.0
Q358	6.0	9.1	5.3
Q359	3.8	5.2	4.5
Q380	4.8	GND	5.4
Q390	5.7	9.0	5.0
Q391	4.5	9.1	3.8
Q392	0	GND	2.9
Q393	2.3	GND	2.9
Q394	2.2	GND	2.9
Q501	-.7	48.0	GND
Q502	-3.1	111.9	-3.1
Q556	2.1	4.4	1.5
Q571	110.8	10.7	111.6
Q601	0	13	GND
Q602	.9	3.6	.4
Q605	9.8	10.8	9.1
Q606	.1	3.9	GND
Q608	.4	1.5	0
Q650	5.7	9.1	5.1
Q670	.7	.1	0
	G	S	D
Q607	1.5	0	152.3

All voltages are in V

A BOARD (*) MARK VARIANT LIST

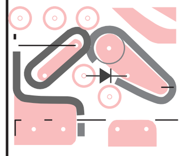
REF NO.	LOC.	KV-20M42	KV-21MB42C KV-21MB42M KV-21MB42P	KV-21ME42 KV-21ME42C	KV-20S42 KV-20S43	KV-21SB42C KV-21SB42M	KV-21SE42 KV-21SE42C	KV-21SE82 KV-21SE82C
C202	B-11	#	#	#	1	1	1	1
C206	B-9	#	#	#	1	1	1	1
C207	B-12	#	#	#	#	#	#	0. 47
C208	B-12	#	#	#	#	#	#	0. 47
C209	B-13	#	#	#	#	#	#	4.7
C211	B-14	#	#	#	#	#	#	10
C212	C-13	#	#	#	#	#	#	4.7
C213	C-13	#	#	#	#	#	#	10
C214	C-16	#	#	#	0.22	0.22	0.22	0.22
C216	C-17	#	#	0.47	0.47	0.47	0.47	0.47
C220	B-18	#	#	470 25V	470 25V	470 25V	470 25V	470 25V
C229	G-2	#	#	#	#	#	#	0.01
C233	D-6	#	#	#	1	1	1	1
C234	D-8	10	10	10	10	10	10	#
C260	D-16	1	1	1	#	#	#	#
C304	H-11	#	#	#	#	#	#	0.1 25V F
C307	H-12	#	#	#	#	#	#	10
C340	F-14	#	#	#	#	#	#	1
C348	I-17	#	#	#	#	#	#	330p
C350	G-16	#	#	#	#	#	#	0.01
C351	G-16	#	#	#	#	#	#	10
C352	G-16	#	#	#	#	#	#	0.01
C353	G-17	#	#	#	#	#	#	0.1 25V
C354	G-17	#	#	#	#	#	#	0.1 25V
C355	G-17	#	#	#	#	#	#	0.22 25V
C356	G-18	#	#	#	#	#	#	0.1 25V
C357	F-17	#	#	#	#	#	#	0.01
C358	F-17	#	#	#	#	#	#	47 25V
C359	F-17	#	#	#	#	#	#	0.01
C360	F-16	#	#	#	#	#	#	0.01
C361	F-15	#	#	#	#	#	#	0.022
C362	I-12	#	#	#	#	#	#	10
C400	D-13	#	#	#	#	#	#	4.7
C401	D-14	#	#	#	#	#	#	0.1
C402	D-14	#	#	#	#	#	#	.0047
C403	D-14	#	#	#	#	#	#	4.7
C404	D-14	#	#	#	#	#	#	4.7
C405	D-14	#	#	#	#	#	#	4.7
C406	D-15	#	#	#	#	#	#	4.7
C407	D-15	#	#	#	#	#	#	10
C410	D-15	#	#	#	#	#	#	4.7
C411	D-15	#	#	#	#	#	#	0.1
C412	D-14	#	#	#	#	#	#	0.1
C413	D-14	#	#	#	#	#	#	47
C414	D-14	#	#	#	#	#	#	.0047
C415	D-14	#	#	#	#	#	#	0.1
C416	D-14	#	#	#	#	#	#	4.7
C418	F-9	10	10	10	10	10	10	4.7
C601	N-2	0.47 125V	0.47 300V	0.47 300V	0.47 125V	0.47 300V	.47 300V	0.47 300V
C613	L-2	470 250V	330 400V	330 400V	470 250V	330 400V	330 400V	330 400V
C616	L-3	#	0.022 400V	0.022 400V	#	0.022 400V	0.022 400V	0.022 400V
C617	M-3	#	220pF 1KV	220pF 1KV	#	220pF 1KV	220pF	220pF 1KV
C638	M-2	0.47	#	#	0.47	#	#	#
CN401	D-19	#	#	2P	2P	2P	2p	2P
D202	B-11	#	#	#	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B
D204	B-8	#	#	#	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B
D206	H-2	#	#	#	#	#	#	MTZJ-T-77-10B
D207	D-11	#	#	#	#	#	#	RD3.3ES-T1B
D215	B-16	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B	#	#	#	#
D280	G-3	#	#	#	#	#	#	MTZJ-T-77-10B
D609	L-3	#	RU-1P	RU-1P	#	RU-1P	RU-1P	RU-1P
FB350	G-16	#	#	#	#	#	#	JW 5MM
IC200	D-11	#	#	#	NJM2521M-TE1	NJM2521M-TE1	NJM2521M-TE1	NJM2521M-TE1
IC202	C-13	#	#	#	#	#	#	NJM4558M-TE2
IC302	F-16	#	#	#	#	#	#	CXD2073S
IC400	B-16	TDA7056B/N1	TDA7056B/N1	#	#	#	#	#
IC401	B-18	#	#	TDA7057AQ/N2	TDA7057AQ/N2	TDA7057AQ/N2	TDA7057AQ/N2	TDA7057AQ/N2
IC402	C-14	#	#	#	#	#	#	CXA2021S
IC601	L-4	STR-F6624	STR-F6654	STR-F6654	STR-F6624	STR-F6654	STR-F6654	STR-F6654
J200	A-12	#	#	#	#	#	#	2P

◀ A Board C Board ▶

REF NO.	LOC.	KV-20M42	KV-21MB42C KV-21MB42M KV-21MB42P	KV-21ME42 KV-21ME42C	KV-20S42 KV-20S43	KV-21SB42C KV-21SB42M	KV-21SE42 KV-21SE42C	KV-21SE82 KV-21SE82C
J201	B-10	2P	2P	2P	3P	3P	3P	3P
J202	B-8	2P	2P	2P	3P	3P	3P	3P
JW203	C-18	7.5MM	7.5MM	#	#	#	#	#
JW380	F-13	#	#	#	#	#	#	7.5MM
JW690	L-1	5MM	#	#	5MM	#	#	#
JW691	L-1	5MM	#	#	5MM	#	#	#
L351	F-17	#	#	#	#	#	#	47µH
L352	F-16	#	#	#	#	#	#	10µH
PS201	C-17	1-532-637-00	1-532-637-00	1-532-984-11	1-532-984-11	1-532-984-11	1-532-984-11	1-532-984-11
Q200	D-12	#	#	#	#	#	#	2SD601A
Q201	D-12	#	#	#	#	#	#	2SD601A
Q202	D-17	2SD601A	2SD601A	2SD601A	#	#	#	#
Q206	C-16	#	#	#	#	#	#	2SD601A
Q207	D-16	#	#	#	#	#	#	2SD601A
Q340	F-14	#	#	#	#	#	#	2SD601A
Q350	H-17	#	#	#	#	#	#	2SB709A
Q351	H-17	#	#	#	#	#	#	2SD601A
Q352	G-16	#	#	#	#	#	#	2SB709A
Q353	H-16	#	#	#	#	#	#	2SB709A
Q354	I-17	#	#	#	#	#	#	2SB709A
Q355	H-17	#	#	#	#	#	#	2SD601A
Q356	H-16	#	#	#	#	#	#	2SB709A
Q357	I-15	#	#	#	#	#	#	2SB709A
Q358	I-12	#	#	#	#	#	#	2SD601A
Q359	I-11	#	#	#	#	#	#	2SB709A
Q380	F-14	#	#	#	#	#	#	2SB709A
R010	G-7	#	#	#	220	220	220	220
R011	G-7	#	#	#	220	220	220	220
R051	G-7	#	#	#	220	220	220	220
R053	F-8	#	#	#	#	#	#	220
R070	G-8	#	#	#	4.7K	4.7K	4.7K	4.7K
R071	G-8	#	#	#	4.7K	4.7K	4.7K	4.7K
R080	F-7	#	#	#	#	#	#	10K
R202	B-11	#	#	#	470K	470K	470K	470K
R206	B-9	#	#	#	470K	470K	470K	470K
R214	B-12	#	#	#	#	#	#	470K
R215	B-12	#	#	#	#	#	#	220
R216	B-13	#	#	#	#	#	#	470K
R217	B-13	#	#	#	#	#	#	220
R218	B-13	#	#	#	#	#	#	5.6K
R219	B-13	#	#	#	#	#	#	10K
R220	B-13	#	#	#	#	#	#	10K
R221	B-13	#	#	#	#	#	#	10K
R222	C-13	#	#	#	#	#	#	5.6K
R223	D-13	#	#	#	#	#	#	10K
R224	C-13	#	#	#	#	#	#	10K
R225	C-13	#	#	#	#	#	#	10K
R226	D-11	#	#	#	#	#	#	4.7K
R227	D-12	#	#	#	#	#	#	100K
R228	D-12	#	#	#	#	#	#	4.7K
R229	D-12	#	#	#	#	#	#	100K
R230	B-14	#	#	12K	12K	12K	10K	#
R231	D-16	#	#	12K	12K	12K	10K	#
R232	C-16	#	#	#	#	#	#	10K
R233	D-16	#	#	#	#	#	#	10K
R234	C-16	#	#	3.3K	3.3K	3.3K	3.3K	2.2K
R235	D-16	3.3K	3.3K	3.3K	3.3K	3.3K	3.3K	2.2K
R237	B-18	#	#	220	220	220	220	220
R238	C-18	#	#	1K	1K	1K	1K	1K
R241	G-8	#	#	#	4.7K	4.7K	4.7K	4.7K
R245	C-17	#	#	0	#	#	#	#
R246	B-3	0	0	0	#	#	#	#
R247	C-16	#	#	#	#	#	#	100
R248	D-16	#	#	#	#	#	#	100
R249	C-16	#	#	#	#	#	#	22K
R250	D-16	#	#	#	#	#	#	22K
R260	D-16	100K	100K	100K	#	#	#	#
R261	D-16	100K	100K	100K	#	#	#	#
R262	D-17	100	100	100	#	#	#	#
R268	C-17	#	#	3.3K	3.3K	6.8K	5.6K	22K
R269	D-17	5.6K	6.8K	3.3K	3.3K	3.3K	5.6K	22K

REF NO.	LOC.	KV-20M42	KV-21MB42C KV-21MB42M KV-21MB42P	KV-21ME42 KV-21ME42C	KV-20S42 KV-20S43	KV-21SB42C KV-21SB42M	KV-21SE42 KV-21SE42C	KV-21SE82 KV-21SE82C
R283	G-2	#	#	#	#	#	#	75
R287	G-3	#	#	#	#	#	#	4.7K
R303	F-13	#	#	#	#	#	#	100
R341	G-15	#	#	#	#	#	#	47
R342	F-15	#	#	#	#	#	#	100K
R343	F-14	#	#	#	#	#	#	10K
R344	F-14	#	#	#	#	#	#	3.3K
R350	G-17	#	#	#	#	#	#	220
R351	G-17	#	#	#	#	#	#	220
R352	G-17	#	#	#	#	#	#	3.3K
R354	G-18	#	#	#	#	#	#	3.3K
R357	F-16	#	#	#	#	#	#	56K
R358	F-16	#	#	#	#	#	#	560
R359	G-17	#	#	#	#	#	#	2.2K
R360	H-17	#	#	#	#	#	#	220pF
R361	G-17	#	#	#	#	#	#	1K
R362	H-17	#	#	#	#	#	#	560
R363	H-16	#	#	#	#	#	#	330
R364	G-16	#	#	#	#	#	#	100
R365	H-16	#	#	#	#	#	#	0
R366	G-16	#	#	#	#	#	#	1.5K
R367	H-17	#	#	#	#	#	#	2.2K
R368	I-17	#	#	#	#	#	#	100
R369	I-16	#	#	#	#	#	#	680
R370	G-17	#	#	#	#	#	#	220
R372	I-16	#	#	#	#	#	#	270
R373	H-16	#	#	#	#	#	#	100
R374	I-16	#	#	#	#	#	#	100
R375	H-15	#	#	#	#	#	#	1.5K
R376	I-12	#	#	#	#	#	#	1K
R377	I-12	#	#	#	#	#	#	1K
R378	I-11	#	#	#	#	#	#	470
R379	H-16	#	#	#	#	#	#	1K
R380	G-17	#	#	#	#	#	#	2.2K
R382	E-14	#	#	#	#	#	#	1.5K
R387	I-17	#	#	#	#	#	#	100
R388	G-17	#	#	#	#	#	#	100
R395	I-11	#	#	#	#	#	#	100
R396	G-16	#	#	#	#	#	#	100
R397	H-15	#	#	#	#	#	#	100
R400	F-8	56K	56K	22K	22K	22K	22K	22K
R402	D-15	#	#	#	#	#	#	1M
R403	D-15	#	#	#	#	#	#	220
R404	D-15	#	#	#	#	#	#	220
R432	F-9	33K	33K	12K	12K	12K	12K	8.2K
R433	F-9	27K	27K	12K	12K	12K	12K	#
R651	M-2	4.7M	8.2M	8.2M	4.7M	8.2M	8.2M	8.2M
R652	M-1	#	1.8	1.8	#	1.8	1.8	1.8
R658	L-3	#	100K	100K	#	100K	100K	100K
R664	L-2	390K	270K	270K	390K	270K	270K	270K
R698	L-2	JW 5.0mm	270K	270K	JW 5.0mm	270K	270K	270K
T603	M-5	1-433-816-11	1-433-817-11	1-433-817-11	1-433-816-11	1-433-817-11	1-433-817-11	1-433-817-11
THP601	M-2	1-810-597-11	1-803-540-11	1-803-540-11	1-810-597-11	1-803-540-11	1-803-540-11	1-803-540-11
TU101	A-2	8-598-430-00	8-598-430-00	8-598-430-00	8-598-431-00	8-598-431-00	8-598-431-00	8-598-431-00
VDR601	N-2	1-803-585-11	1-803-587-11	1-803-587-11	1-803-585-11	1-803-587-11	1-803-587-11	1-803-587-11

#: Not Mounted



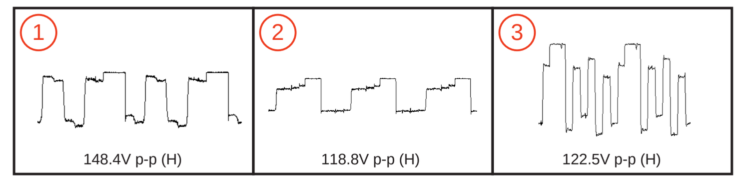
NOTE:
Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

C BOARD IC VOLTAGE LIST

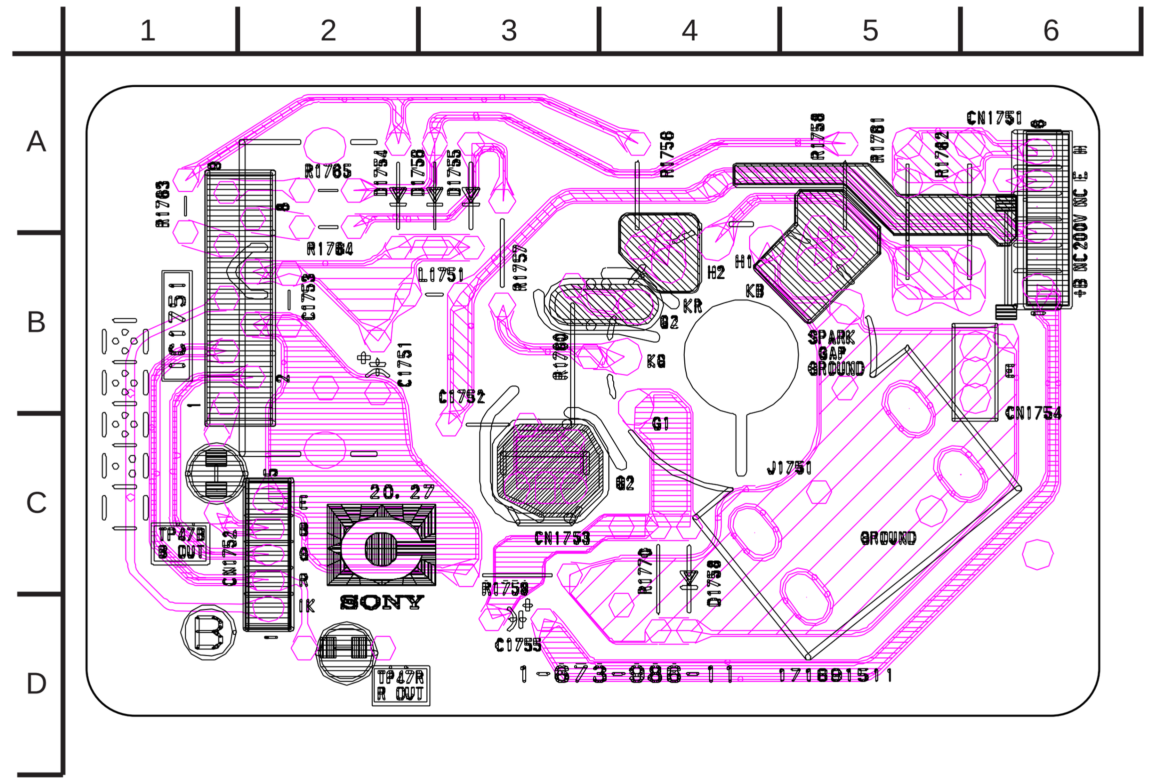
IC1751	
PIN	VOLT
1	2.1
2	2.2
3	2.1
4	GND
5	3.7
6	193.4
7	146.5
8	133.8
9	134.9

All voltages are in V

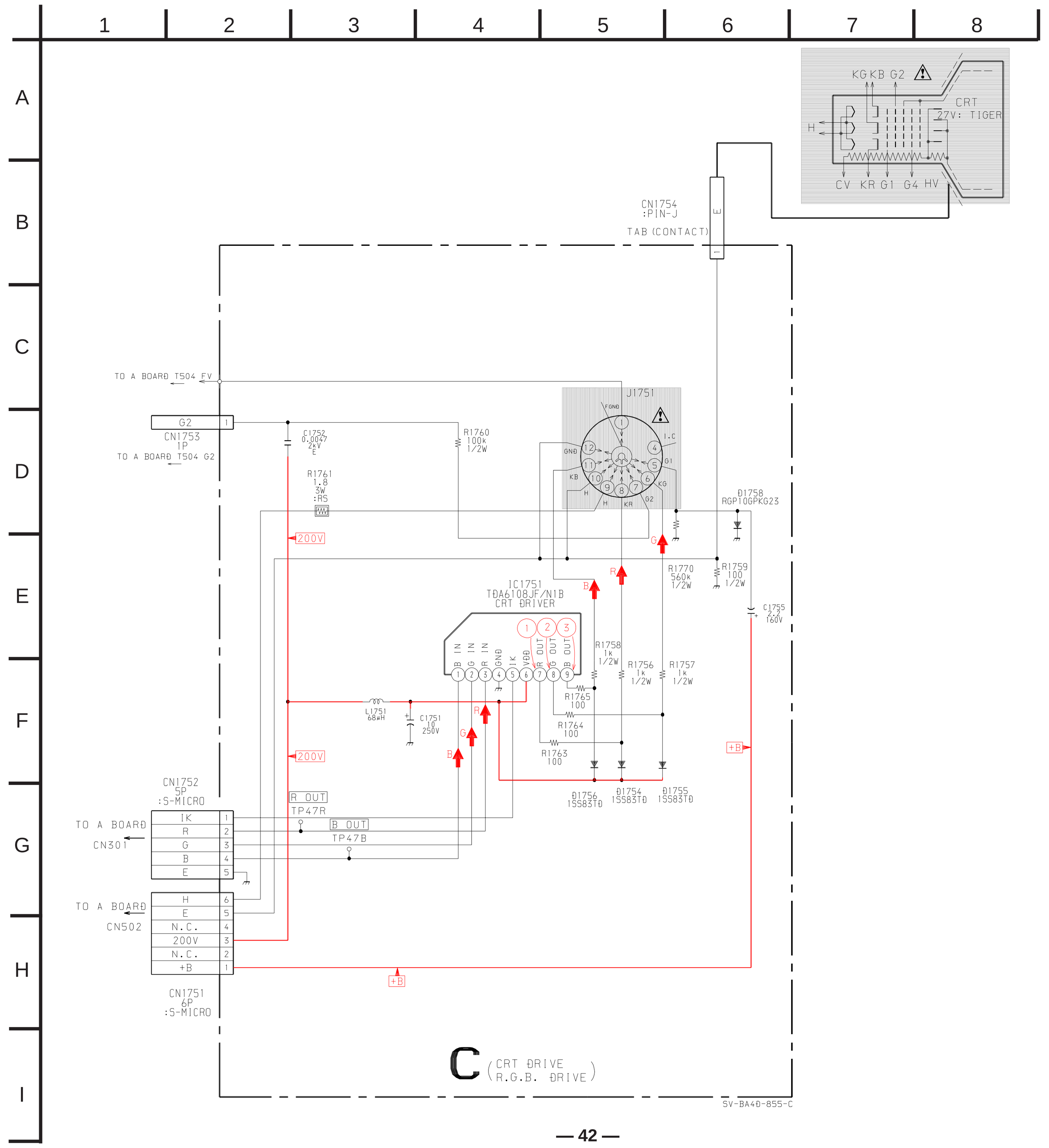
C BOARD WAVEFORMS



C [R,G,B DRIVE CRT DRIVE]



C BOARD SCHEMATIC DIAGRAM



855 C Board.p65 1 3/31/99, 7:03 PM

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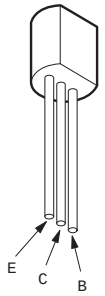
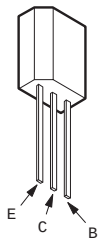
2SD1292



2SD2137



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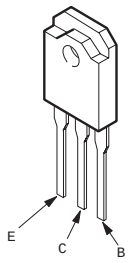

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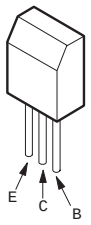
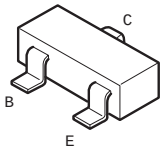
2SD774



2SB709
2SD601A



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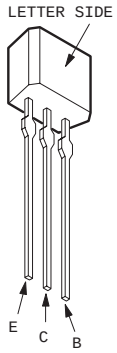
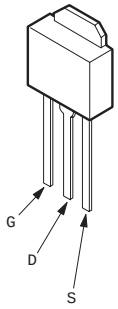


2SK2845



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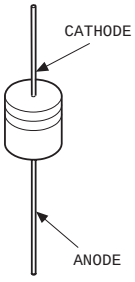
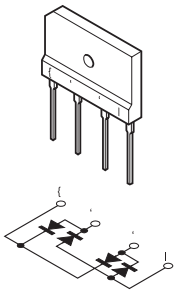
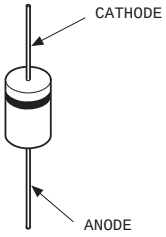
D1N20R-TA
RD3.3ES-T1B



D3SB60F



ERC04-06S
MTZJ-T-77-5.1C
MTZJ-T-77-5.6C
MTZJ-T-77-6.2C
MTZJ-T-77-8.2B
MTZJ-T-77-10B
MTZJ-T-77-30D
S2L20UF
S3L20UF4
RU-1P
UDZ-TE-17-5.1B



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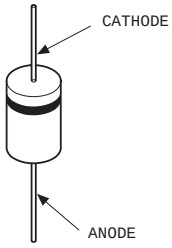
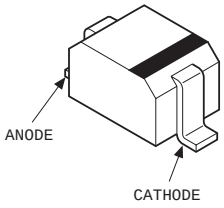
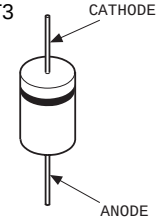
ERA22-08TP3
EZ0150AV1
RGP10GPKG23
GP08DPKG23



MA111-TX



RU4AM-T3



SECTION 7
EXPLODED VIEWS

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The component parts of an assembly are indicated by the reference numbers in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Note:

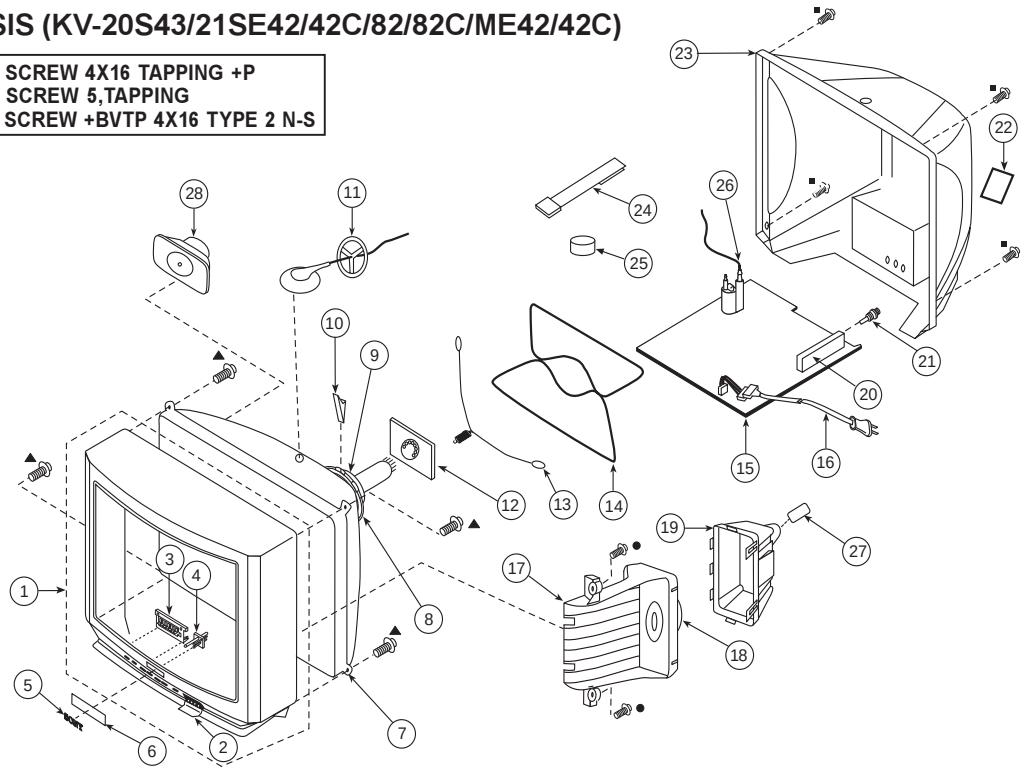
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

7-1. CHASSIS (KV-20S43/21SE42/42C/82/82C/ME42/42C)

● **4-384-096-01 SCREW 4X16 TAPPING +P**
▲ **4-365-808-01 SCREW 5,TAPPING**
■ **7-685-663-79 SCREW +BVTP 4X16 TYPE 2 N-S**



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-1036-731-1	BEZNET ASSY (KV-21ME42/42C)	2-4
1		X-4036-797-1	BEZNET ASSY (KV-20S43)	2-4
1		X-4036-730-1	BEZNET ASSY (KV-21SE42/42C)	2-4
1		X-4035-233-1	BEZNET ASSY (KV-21SE82/82C)	2-4
2		4-062-604-01	DOOR (KV-21SE42/42C/21SE82/82C)	
2		4-062-596-11	DOOR (KV-20S43)	
2		4-062-604-11	DOOR (KV-21ME42/42C)	
3		4-062-597-11	BUTTON, MULTI (KV-20S43)	
3		4-062-603-01	BUTTON, MULTI (KV-21ME42/42C/SE82/82C)	
3		4-062-603-11	BUTTON, MULTI (KV-21SE42/42C)	
4		4-062-607-01	GUIDE, LED (KV-21ME42/42C/SE42/42C/82/82C)	
4		4-062-599-01	GUIDE, LED (KV-20S43)	
5		4-046-161-01	EMBLEM (NO.8), SONY	
6	*	4-031-698-01	SHEET, ADHESIVE	
7	⚠	8-738-768-05	CRT 21NX (SD-275) (KV-20S43/21/ME42/SE42/82)	
7	⚠	8-738-781-05	CRT 21NX (SD-275/SA) (KV-21ME42C/SE42C/82C)	
8		1-452-277-00	MAGNET, BMC	
9	⚠	8-451-440-21	DY Y21NXA-X	
10		4-053-005-01	SPACER, DY	
11		3-704-372-31	HOLDER, HV CABLE	
12	*	A-1331-917-A	C MOUNTED PC BOARD	
13	*	4-375-394-01	SPRING, TENSION	
14	⚠	1-416-951-11	COIL, DEGAUSS (KV-21ME42/42C/SE42/42C/82/82C)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
14	⚠	1-416-572-21	COIL, DEMAGNETIC (KV-20S43)	
15	*	A-1298-885-A	A COMPLETE PC BOARD (KV-21SE82/82C)	
15	*	A-1298-893-A	A COMPLETE PC BOARD (KV-20S43)	
15	*	A-1298-882-A	A COMPLETE PC BOARD (KV-21ME42/42C)	
15	*	A-1298-832-A	A COMPLETE PC BOARD (KV-21SE42/42C)	
16	⚠	1-751-057-11	CORD, POWER (KV-21SE42/82/ME42)	
16	⚠	1-769-796-71	CORD, POWER (KV-21SE42C/82C/ME42C)	
16	⚠	1-790-316-31	CORD, AC POWER (KV-20S43)	
17	*	4-062-609-01	BAFFLE, SPEAKER (KV-21SE82/82C ONLY)	
18		1-505-404-11	SPEAKER (8CM) (KV-21SE82/82C)	
19		X-4033-616-1	COVER ASSY, SPEAKER (KV-21SE82/82C ONLY)	
20	⚠	8-598-430-00	TUNER, FSS BTF-FA401 (KV-21ME42/42C)	
20	⚠	8-598-431-00	TUNER, FSS BTF-WA411 (KV-20S43/21SE42/42C/82/82C)	
21		1-766-374-11	PLUG, F-PIN	
22		4-068-826-01	LABEL, REAR COVER	
23		4-062-610-03	COVER, REAR (KV-21SE82/82C)	
23		4-062-598-44	COVER, REAR (KV-20S43)	
23		4-062-602-03	COVER, REAR (KV-21SE42/42C)	
23		4-062-602-23	COVER, REAR (KV-21ME42/42C)	
24		4-051-735-22	PIECE A(75), CONV. CORRECT	
25		1-452-032-00	MAGNET, DISC	
26	⚠	1-453-283-21	FBT (NX-1744//X4E4)	
27	*	4-064-221-01	SPONGE, ACOUSTIC (KV-21SE82/82C ONLY)	
28		1-505-831-11	SPEAKER (9X5CM) (KV-20S43/21ME42/42C/)	
28		1-505-930-11	SPEAKER (9X5CM) (KV-21SE42/42C)	

Note:

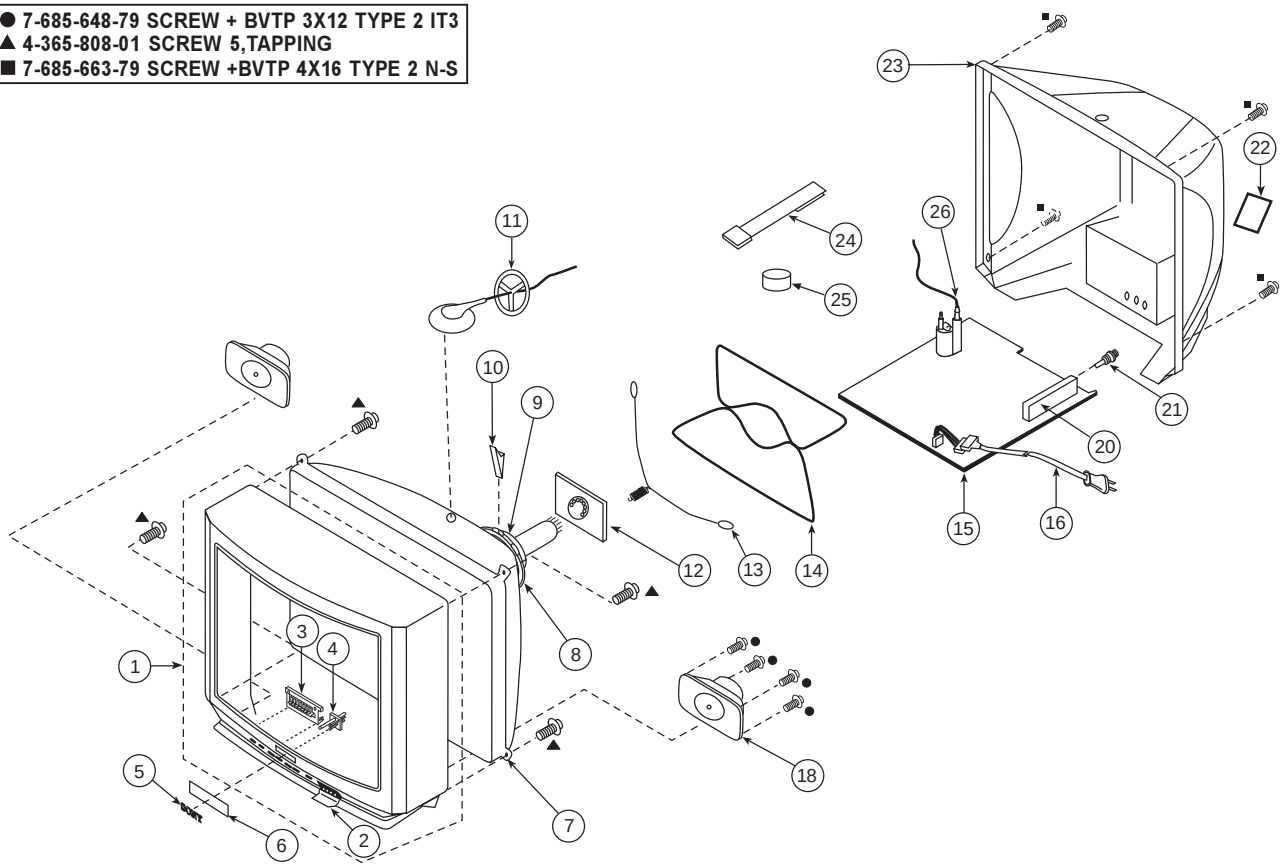
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

7-2. CHASSIS (KV-20M42/S42/21MB42C/42M/42P/SB42C/42M)

● **7-685-648-79 SCREW + BVTP 3X12 TYPE 2 IT3**
▲ **4-365-808-01 SCREW 5,TAPPING**
■ **7-685-663-79 SCREW +BVTP 4X16 TYPE 2 N-S**



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4035-231-1	BEZNET ASSY (KV-20M42/21MB42C)	2-4
1		X-4035-309-1	BEZNET ASSY (KV-20S42/21SB42C/42M)	2-4
1		X-4035-306-1	BEZNET ASSY (KV-21MB42P/42M)	2-4
2		4-062-596-21	DOOR (KV-20S42/21SB42C/42M)	
2		4-062-596-01	DOOR (KV-20M42/21MB42C/42M/42P)	
3		4-062-597-01	BUTTON, MULTI (KV-20M42/S42/21MB42C/42M/42P/SB42C/42M)	
4		4-062-599-01	GUIDE, LED	
5		4-046-161-01	EMBLEM (NO.8), SONY	
6	*	4-031-698-01	SHEET, ADHESIVE	
7	⚠	8-738-768-05	CRT 21NX (SD-275) (KV-20M42/S42/21MB42P/42M/SB42M)	
7	⚠	8-738-781-05	CRT 21NX (SD-275/SA) (KV-21MB42C/SB42C)	
8		1-452-277-00	MAGNET, BMC	
9	⚠	8-451-440-21	DY Y21NXA-X	
10		4-053-005-01	SPACER, DY	
11		3-704-372-31	HOLDER, HV CABLE	
12	*	A-1331-917-A	C MOUNTED PC BOARD	
13	*	4-375-394-01	SPRING, TENSION	
14	⚠	1-416-951-11	COIL, DEGAUSS (KV-21MB42C/42M/42P/SB42C/42M)	
14	⚠	1-416-572-21	COIL, DEMAGNETIC (KV-20M42/S42)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
15	*	A-1298-835-A	A COMPLETE PC BOARD (KV-20M42)	
15	*	A-1298-883-A	A COMPLETE PC BOARD (KV-21SB42C/42M)	
15	*	A-1298-893-A	A COMPLETE PC BOARD (KV-20S42)	
15	*	A-1298-881-A	A COMPLETE PC BOARD (KV-21MB42C/42P/42M)	
16	⚠	1-751-057-11	CORD, POWER (KV-21MB42P/42M/SB42M)	
16	⚠	1-790-001-21	CORD, AC POWER (KV-20M42/S42)	
16	⚠	1-769-796-71	CORD, POWER (KV-21SB42C/MB42C)	
18		1-505-831-11	SPEAKER (9X5CM) (KV-20S42/21SB42C/42M)	
18		1-505-270-11	SPEAKER (9X5CM) (KV-20M42/21MB42C/42M/42P)	
20	⚠	8-598-430-00	TUNER, FSS BTF-FA401 (KV-20M42/21MB42C/42M/42P)	
20	⚠	8-598-431-00	TUNER, FSS BTF-WA411 (KV-20S42/21SB42C/42M)	
21		1-766-374-11	PLUG, F-PIN	
22		4-068-826-01	LABEL, REAR COVER	
23		4-062-598-04	COVER, REAR (KV-20M42/S42/21MB42C/42M/42P/SB42C/42M)	
24		4-051-735-22	PIECE A(75), CONV. CORRECT	
25		1-452-032-00	MAGNET, DISC	
26	⚠	1-453-283-21	FBT (NX-1744//X4E4)	

NOTES:

SECTION 8
ELECTRICAL PARTS LIST

PARTS LISTING TABLE OF CONTENTS

Description **Page**

A BOARD COMMON PARTS LIST: Parts common to all models listed in this manual.....46

A BOARD VARIANT PARTS LIST: Parts that belong only to the model specified.

Refer to the designated variant parts list when seeking a part indicated by an asterisk (*) on the A board schematic, or by the word “variant” on the common parts list.

Model **Page**

KV-20M42 55
KV-20S42/20S43 56
KV-21MB42C/42M/42P.....57
KV-21ME42/42C 58
KV-21SB42C/42M 59
KV-21SE42/42C 60
KV-21SE82/82C 61

C BOARD COMPLETE PARTS LIST.....54

PACKAGING LIST AND ACCESSORIES.....63

A COMMON PARTS LISTING

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A

REF. NO.	PART NO.	DESCRIPTION	REMARK
*		**A BOARD, COMPLETE**	
	A-1298-832-A	**(KV-21SE42/42C)**	
	A-1298-885-A	**(KV-21SE82/82C)**	
	A-1298-893-A	**(KV-20S42/20S43)**	
	A-1298-883-A	**(KV-21SB42M/42C)**	
	A-1298-882-A	**(KV-21ME42/42C)**	
	A-1298-881-A	**(KV-21MB42C/42M/42P)**	
	A-1298-835-A	**(KV-20M42)**	
	1-533-223-11	**HOLDER, FUSE**	
	4-382-854-1	**SCREW (M3X10), P, SW (+)**	
	4-382-854-11	**SCREW (M3X10), P, SW (+)**	

CAPACITOR

C001	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C004	1-104-664-11	ELECT	47µF	20%	25V
C005	1-126-960-11	ELECT	1µF	20%	50V
C006	1-163-035-00	CERAMIC CHIP	0.047µF		50V
C007	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C008	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C010	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C011	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C012	1-163-009-11	CERAMICCHIP	0.001µF	10%	50V
C013	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C014	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C017	1-126-960-11	ELECT	1µF	20%	50V
C019	1-163-135-00	CERAMIC CHIP	560pF	5%	50V
C020	1-130-495-00	FILM	0.1µF	5%	50V
C027	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C028	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C030	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C034	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C037	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C038	1-126-941-11	ELECT	470µF	20%	25V
C039	1-126-964-11	ELECT	10µF	20%	50V
C046	1-104-664-11	ELECT	47µF	20%	25V
C047	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C048	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C050	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C051	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C052	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C053	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C055	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C060	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C062	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C065	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C072	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C074	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C077	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C091	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
C092	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
C101	1-126-963-11	ELECT	4.7µF	20%	50V
C150	1-126-935-11	ELECT	470µF	20%	16V
C151	1-104-664-11	ELECT	47µF	20%	25V
C160	1-126-382-11	ELECT	100µF	20%	16V
C200	1-107-698-11	ELECT	10µF	20%	25V
C201	1-126-960-11	ELECT	1µF	20%	50V
C202		VARIANT (SEE VARIANT PARTS LIST)			
C203	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C204	1-107-698-11	ELECT	10µF	20%	25V
C205	1-126-960-11	ELECT	1µF	20%	50V
C206		VARIANT (SEE VARIANT PARTS LIST)			
C207		VARIANT (SEE VARIANT PARTS LIST)			
C208		VARIANT (SEE VARIANT PARTS LIST)			
C209		VARIANT (SEE VARIANT PARTS LIST)			
C211		VARIANT (SEE VARIANT PARTS LIST)			
C212		VARIANT (SEE VARIANT PARTS LIST)			
C213		VARIANT (SEE VARIANT PARTS LIST)			
C214		VARIANT (SEE VARIANT PARTS LIST)			
C215	1-126-957-11	ELECT	0.22µF	20%	50V
C216		VARIANT (SEE VARIANT PARTS LIST)			
C217	1-126-959-11	ELECT	0.47µF	20%	50V
C218	1-126-941-11	ELECT	470µF	20%	25V
C219	1-130-495-00	FILM	0.1µF	5%	50V
C220		VARIANT (SEE VARIANT PARTS LIST)			
C221	1-126-941-11	ELECT	470µF	20%	25V

Note:

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Note:

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COMMON PARTS LISTING

A

REF. NO.		PART NO.	DESCRIPTION			REMARK
C222		1-126-964-11	ELECT	10µF	20%	50V
C226		1-107-635-11	ELECT	4.7µF	20%	160V
C228		1-126-964-11	ELECT	10µF	20%	50V
C229			VARIANT (SEE VARIANT PARTS LIST)			
C232		1-126-960-11	ELECT	1µF	20%	50V
C233			VARIANT (SEE VARIANT PARTS LIST)			
C234			VARIANT (SEE VARIANT PARTS LIST)			
C236		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C243		1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C260			VARIANT (SEE VARIANT PARTS LIST)			
C301		1-163-233-11	CERAMIC CHIP	18pF	5%	50V
C303		1-126-964-11	ELECT	10µF	20%	50V
C304			VARIANT (SEE VARIANT PARTS LIST)			
C305		1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C306		1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C307			VARIANT (SEE VARIANT PARTS LIST)			
C308		1-126-964-11	ELECT	10µF	20%	50V
C309		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C310		1-126-960-11	ELECT	1µF	20%	50V
C311		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C312		1-126-942-61	ELECT	1000µF	20%	25V
C313		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C314		1-163-009-11	CERAMIC CHIP	.001µF	10%	50V
C316		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C317		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C318		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C319		1-126-963-11	ELECT	4.7µF	20%	50V
C320		1-126-959-11	ELECT	0.47µF	20%	50V
C321		1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C330		1-163-007-11	CERAMIC CHIP	680pF	10%	50V
C340			VARIANT (SEE VARIANT PARTS LIST)			
C348			VARIANT (SEE VARIANT PARTS LIST)			
C350			VARIANT (SEE VARIANT PARTS LIST)			
C351			VARIANT (SEE VARIANT PARTS LIST)			
C352			VARIANT (SEE VARIANT PARTS LIST)			
C353			VARIANT (SEE VARIANT PARTS LIST)			
C354			VARIANT (SEE VARIANT PARTS LIST)			
C355			VARIANT (SEE VARIANT PARTS LIST)			
C356			VARIANT (SEE VARIANT PARTS LIST)			
C357			VARIANT (SEE VARIANT PARTS LIST)			
C358			VARIANT (SEE VARIANT PARTS LIST)			
C359			VARIANT (SEE VARIANT PARTS LIST)			
C360			VARIANT (SEE VARIANT PARTS LIST)			
C361			VARIANT (SEE VARIANT PARTS LIST)			
C362			VARIANT (SEE VARIANT PARTS LIST)			
C373		1-163-038-91	CERAMIC CHIP	0.1µF		25V
C374		1-126-935-11	ELECT	470µF	20%	16V
C375		1-163-038-91	CERAMIC CHIP	0.1µF		25V
C376		1-104-664-11	ELECT	47µF	20%	25V
C390		1-130-495-00	FILM	0.1µF	5%	50V
C400			VARIANT (SEE VARIANT PARTS LIST)			
C401			VARIANT (SEE VARIANT PARTS LIST)			
C402			VARIANT (SEE VARIANT PARTS LIST)			
C403			VARIANT (SEE VARIANT PARTS LIST)			
C404			VARIANT (SEE VARIANT PARTS LIST)			
C405			VARIANT (SEE VARIANT PARTS LIST)			
C406			VARIANT (SEE VARIANT PARTS LIST)			
C407			VARIANT (SEE VARIANT PARTS LIST)			
C410			VARIANT (SEE VARIANT PARTS LIST)			
C411			VARIANT (SEE VARIANT PARTS LIST)			
C412			VARIANT (SEE VARIANT PARTS LIST)			
C413			VARIANT (SEE VARIANT PARTS LIST)			
C414			VARIANT (SEE VARIANT PARTS LIST)			
C415			VARIANT (SEE VARIANT PARTS LIST)			
C416			VARIANT (SEE VARIANT PARTS LIST)			
C418			VARIANT (SEE VARIANT PARTS LIST)			
C502		1-106-371-00	MYLAR	0.015µF	20%	200V
C504		1-102-228-00	CERAMIC	470pF	10%	500V
C505	⚠	1-117-626-11	FILM	2000pF	3%	1.2KV
C507	⚠	1-117-633-11	FILM	3900pF	3%	1.2KV
C508	⚠	1-106-371-00	MYLAR	0.015µF	20%	200V
C509	⚠	1-162-115-00	CERAMIC	330pF	10%	2KV
C511	⚠	1-117-665-11	FILM	0.33µF	5%	250V
C520		1-129-722-00	FILM	0.047µF	5%	630V
C531		1-106-387-00	MYLAR	0.068µF	10%	200V
C541		1-126-969-11	ELECT	220µF	20%	50V
C542		1-126-967-11	ELECT	47µF	20%	50V
C543		1-136-169-00	FILM	0.22µF	5%	50V
C552		1-102-244-00	CERAMIC	220pF	10%	500V
C553		1-107-652-11	ELECT	10µF	20%	250V
C556		1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C561		1-102-244-00	CERAMIC	220pF	10%	500V
C562		1-126-941-11	ELECT	470µF	20%	25V
C563		1-137-417-11	MYLAR	0.0047µF	10%	200V
C564		1-126-941-11	ELECT	470µF	20%	25V
C571	⚠	1-126-965-11	ELECT	22µF	20%	50V
C573		1-126-963-11	ELECT	4.7µF	20%	50V
C574		1-107-635-11	ELECT	4.7µF	20%	160V
C575	⚠	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C576		1-123-024-21	ELECT	33µF		160V
C577	⚠	1-126-959-11	ELECT	0.47µF	20%	50V
C591	⚠	1-137-150-11	MYLAR	0.01µF	10%	100V
C601			VARIANT (SEE VARIANT PARTS LIST)			
C602	⚠	1-113-941-11	CERAMIC	0.0047µF	20%	125V
C603	⚠	1-113-941-11	CERAMIC	0.0047µF	20%	125V

A COMMON PARTS LISTING

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REF. NO.		PART NO.	DESCRIPTION	REMARK		
C604	⚠	1-113-941-11	CERAMIC	0.0047µF	20%	125V
C605	⚠	1-113-941-11	CERAMIC	0.0047µF	20%	125V
C611		1-125-772-91	CERAMIC	1500pF	10%	2KV
C613			VARIANT (SEE VARIANT PARTS LIST)			
C614		1-130-471-00	MYLAR	0.001µF	5%	50V
C616			VARIANT (SEE VARIANT PARTS LIST)			
C617			VARIANT (SEE VARIANT PARTS LIST)			
C618		1-136-619-11	FILM	0.0016µF	3%	2KV
C620		1-102-114-00	CERAMIC	470pF	10%	50V
C621		1-136-356-11	FILM	470pF	5%	50V
C622		1-136-479-11	FILM	0.001µF	5%	50V
C623		1-136-153-00	FILM	0.01µF	5%	50V
C626		1-126-959-11	ELECT	0.47µF	20%	50V
C628		1-104-665-11	ELECT	100µF	20%	25V
C629		1-104-665-11	ELECT	100µF	20%	25V
C630		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C631		1-126-768-11	ELECT	2200µF	20%	16V
C632		1-126-942-61	ELECT	1000µF	20%	25V
C633		1-126-967-11	ELECT	47µF	20%	50V
C634		1-124-347-00	ELECT	100µF	20%	160V
C638			VARIANT (SEE VARIANT PARTS LIST)			
C641		1-102-002-00	CERAMIC	680pF	10%	500V
C643		1-113-924-11	CERAMIC	0.0047µF	20%	250V
C644		1-113-924-11	CERAMIC	0.0047µF	20%	250V
C645		1-137-605-11	FILM	0.01µF	10%	250V
C646		1-107-679-91	ELECT	10µF	20%	450V
C647		1-130-467-00	MYLAR	470pF	5%	50V
C648		1-162-318-11	CERAMIC	0.001µF	10%	500V
C650		1-130-471-00	MYLAR	0.001µF	5%	50V
C651		1-126-382-11	ELECT	100µF	20%	16V
C653		1-104-664-11	ELECT	47µF	20%	25V
C654		1-126-970-11	ELECT	330µF	20%	50V
C656		1-126-965-11	ELECT	22µF	20%	50V
C657		1-102-002-00	CERAMIC	680pF	10%	500V
C690		1-126-959-11	ELECT	0.47µF	20%	50V
C691		1-126-941-11	ELECT	470µF	20%	25V
C692		1-104-664-11	ELECT	47µF	20%	25V
C693		1-137-194-81	FILM	0.47µF	5%	50V

CONNECTOR

CN203	*	1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P	
CN301	*	1-564-508-11	PLUG, CONNECTOR 5P	
CN401			VARIANT (SEE VARIANT PARTS LIST)	
CN402	*	1-564-505-11	PLUG, CONNECTOR 2P	
CN501	*	1-580-798-11	CONNECTOR PIN (DY) 6P	
CN502	*	1-564-509-11	PLUG, CONNECTOR 6P	
CN601	*	1-580-843-11	PIN, CONNECTOR (POWER)	
CN602	*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	

DIODE

D001		8-719-921-44	DIODE MTZJ-5.1C
D002		1-810-039-21	LED UNIT
D003		8-719-991-33	DIODE 1SS133T-77
D004		8-719-991-33	DIODE 1SS133T-77
D201		8-719-110-17	DIODE RD10ESB2
D202			VARIANT (SEE VARIANT PARTS LIST)
D203		8-719-110-17	DIODE RD10ESB2
D204			VARIANT (SEE VARIANT PARTS LIST)
D205		8-719-982-22	DIODE MTZJ-30D
D206			VARIANT (SEE VARIANT PARTS LIST)
D207			VARIANT (SEE VARIANT PARTS LIST)
D208		8-719-110-17	DIODE RD10ESB2
D209		8-719-110-17	DIODE RD10ESB2
D210		8-719-110-17	DIODE RD10ESB2
D215			VARIANT (SEE VARIANT PARTS LIST)
D280			VARIANT (SEE VARIANT PARTS LIST)
D301		8-719-110-08	DIODE RD8.2ESB2
D302		8-719-921-44	DIODE MTZJ-5.1C
D310		8-719-404-50	DIODE MA111-TX
D311		8-719-404-50	DIODE MA111-TX
D320		8-719-976-99	DIODE DTZ5.1B
D403		8-719-991-33	DIODE 1SS133T-77
D434		8-719-991-33	DIODE 1SS133T-77
D501		8-719-945-80	DIODE ERC06-15S
D502		8-719-302-43	DIODE EL1Z
D520		8-719-067-63	DIODE MDV04-600RL
D541		8-719-908-03	DIODE GP08D
D552		8-719-302-43	DIODE EL1Z
D561		8-719-979-85	DIODE EGP20G
D562		8-719-979-85	DIODE EGP20G
D571	⚠	8-719-991-33	DIODE 1SS133T-77
D572		8-719-991-33	DIODE 1SS133T-77
D573		8-719-110-08	DIODE RD8.2ESB2
D574	⚠	8-719-302-43	DIODE EL1Z
D581	⚠	8-719-991-33	DIODE 1SS133T-77
D601	⚠	8-719-510-51	DIODE D3SB60F
D602		8-719-991-33	DIODE 1SS133T-77
D603		8-719-063-70	DIODE D1NL20U
D609			VARIANT (SEE VARIANT PARTS LIST)
D611		8-719-110-17	DIODE RD10ESB2
D613		8-719-063-70	DIODE D1NL20U
D614		8-719-063-70	DIODE D1NL20U

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COMMON PARTS LISTING

A

REF. NO.		PART NO.	DESCRIPTION	REMARK
D615		8-719-510-02	DIODE D1NS4	
D616		8-719-510-73	DIODE S3L20UF4	
D617		8-719-027-43	DIODE S2L20UF	
D620		8-719-057-52	DIODE EZ0150AV1	
D631		8-719-911-55	DIODE U05G	
D632		8-719-911-55	DIODE U05G	
D633		8-719-948-45	DIODE ERA22-08	
D634		8-719-991-33	DIODE 1SS133T-77	
D635		8-719-991-33	DIODE 1SS133T-77	
D636		8-719-063-70	DIODE D1NL20U	
D637		8-719-109-93	DIODE RD6.2ESB2	
D638		8-719-510-48	DIODE D1N20R	
D650		8-719-109-89	DIODE RD5.6ESB2	
D653		8-719-312-10	DIODE RU4AM-T3	
D670		8-719-991-33	DIODE 1SS133T-77	

FUSE

F601	⚠	1-532-506-51	FUSE 6.3A/250V (except KV-20M42/20S42/20S43)	
F601	⚠	1-533-795-11	FUSE 6.3A/125V (KV-20M42/20S42/20S43 only)	

FERRITE BEAD

FB501		1-410-396-41	FERRITE	0.45mH
FB600		1-410-397-21	FERRITE	1.1µH
FB601		1-410-397-21	FERRITE	1.1µH
FB602		1-410-397-21	FERRITE	1.1µH
FB604		1-410-397-21	FERRITE	1.1µH
FB605		1-410-397-21	FERRITE	1.1µH
FB606		1-410-397-21	FERRITE	1.1µH
FB609		1-412-911-11	FERRITE	0µH
FB611		1-410-397-21	FERRITE	1.1µH

IC

IC001		8-759-576-00	IC M37273MF-252SP	
IC002		8-759-575-47	IC NJM78LR05BM-TE2	
IC003		8-759-527-75	IC M24C04-MN6T	
IC004		8-742-014-11	HYB IC SBX1981-51	
IC200			VARIANT (SEE VARIANT PARTS LIST)	
IC201		8-759-450-93	IC NJM2521M-TE1	
IC202			VARIANT (SEE VARIANT PARTS LIST)	
IC301		8-752-083-09	IC CXA2061S	
IC302			VARIANT (SEE VARIANT PARTS LIST)	
IC400			VARIANT (SEE VARIANT PARTS LIST)	
IC401			VARIANT (SEE VARIANT PARTS LIST)	
IC402			VARIANT (SEE VARIANT PARTS LIST)	
IC521	⚠	8-759-100-96	IC NJM4558M-TE2	
IC541		8-759-980-58	IC TDA8172	
IC601			VARIANT (SEE VARIANT PARTS LIST)	
IC602	⚠	8-759-198-31	IC UPC1093J-1-T	

JACK

J200			VARIANT (SEE VARIANT PARTS LIST)
J201			VARIANT (SEE VARIANT PARTS LIST)
J202			VARIANT (SEE VARIANT PARTS LIST)
J400		1-568-267-21	JACK

CHIP CONDUCTOR

JR002		1-216-295-91	SHORT
JR003		1-216-295-91	SHORT

COIL

L001		1-414-267-11	INDUCTOR	10µH
L002		1-414-273-11	INDUCTOR	100µH
L003		1-414-273-11	INDUCTOR	100µH
L150		1-414-273-11	INDUCTOR	100µH
L151		1-414-267-11	INDUCTOR	10µH
L160		1-414-267-11	INDUCTOR	10µH
L301		1-414-271-11	INDUCTOR	47µH
L302		1-414-267-11	INDUCTOR	10µH
L351			VARIANT (SEE VARIANT PARTS LIST)	
L352			VARIANT (SEE VARIANT PARTS LIST)	
L503		1-412-553-11	INDUCTOR	3.3µH
L504		1-412-533-21	INDUCTOR	47µH
L591	⚠	1-412-531-31	INDUCTOR	33µH

PHOTO COUPLER

PH600	⚠	8-749-010-64	PHOTO COUPLER	PC123F2

IC LINK

PS201		VARIANT (SEE VARIANT PARTS LIST)

TRANSISTOR

Q001	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX
Q002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q003	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q200		VARIANT (SEE VARIANT PARTS LIST)
Q201		VARIANT (SEE VARIANT PARTS LIST)
Q202		VARIANT (SEE VARIANT PARTS LIST)
Q203	8-729-216-22	TRANSISTOR 2SA1162-G
Q205	8-729-216-22	TRANSISTOR 2SA1162-G
Q206		VARIANT (SEE VARIANT PARTS LIST)

A COMMON PARTS LISTING

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REF. NO.		PART NO.	DESCRIPTION	REMARK
Q207			VARIANT (SEE VARIANT PARTS LIST)	
Q252		8-729-422-27	TRANSISTOR 2SD601A-Q	
Q300	⚠	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q301		8-729-216-22	TRANSISTOR 2SA1162-G	
Q302		8-729-216-22	TRANSISTOR 2SA1162-G	
Q303		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q305		8-729-216-22	TRANSISTOR 2SA1162-G	
Q340			VARIANT (SEE VARIANT PARTS LIST)	
Q350			VARIANT (SEE VARIANT PARTS LIST)	
Q351			VARIANT (SEE VARIANT PARTS LIST)	
Q352			VARIANT (SEE VARIANT PARTS LIST)	
Q353			VARIANT (SEE VARIANT PARTS LIST)	
Q354			VARIANT (SEE VARIANT PARTS LIST)	
Q355			VARIANT (SEE VARIANT PARTS LIST)	
Q356			VARIANT (SEE VARIANT PARTS LIST)	
Q357			VARIANT (SEE VARIANT PARTS LIST)	
Q358			VARIANT (SEE VARIANT PARTS LIST)	
Q359			VARIANT (SEE VARIANT PARTS LIST)	
Q380			VARIANT (SEE VARIANT PARTS LIST)	
Q390		8-729-422-27	TRANSISTOR 2SD601A-Q	
Q391		8-729-422-27	TRANSISTOR 2SD601A-Q	
Q392		8-729-216-22	TRANSISTOR 2SA1162-G	
Q393		8-729-216-22	TRANSISTOR 2SA1162-G	
Q394		8-729-216-22	TRANSISTOR 2SA1162-G	
Q501		8-729-140-50	TRANSISTOR 2SC3209LK	
Q502		8-729-043-43	TRANSISTOR 2SC5426-01	
Q556		8-729-422-27	TRANSISTOR 2SD601A-Q	
Q571	⚠	8-729-200-17	TRANSISTOR 2SA1091-O	
Q601		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q602		8-729-422-27	TRANSISTOR 2SD601A-Q	
Q605		8-729-423-99	TRANSISTOR 2SD2137-OP	
Q606		8-729-111-55	TRANSISTOR 2SD1312-K	
Q607		8-729-044-30	TRANSISTOR 2SK2845-LB102	
Q608		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q650		8-729-111-55	TRANSISTOR 2SD1312-K	
Q670		8-729-140-96	TRANSISTOR 2SD774-34	

RESISTOR

REF. NO.	PART NO.	DESCRIPTION			REMARK
R001	1-249-429-11	CARBON	10K	5%	1/4W
R002	1-249-429-11	CARBON	10K	5%	1/4W
R003	1-216-033-00	RES, CHIP	220	5%	1/10W
R004	1-216-073-00	RES, CHIP	10K	5%	1/10W
R005	1-247-815-91	CARBON	220	5%	1/4W
R007	1-216-025-91	RES, CHIP	100	5%	1/10W
R008	1-216-033-00	RES, CHIP	220	5%	1/10W
R009	1-247-815-91	CARBON	220	5%	1/4W
R010		VARIANT (SEE VARIANT PARTS LIST)			
R011		VARIANT (SEE VARIANT PARTS LIST)			
R013	1-247-863-91	CARBON	22K	5%	1/4W
R016	1-249-413-11	CARBON	470	5%	1/4W
R017	1-216-113-00	RES, CHIP	470K	5%	1/10W
R018	1-249-417-11	CARBON	1K	5%	1/4W
R019	1-249-425-11	CARBON	4.7K	5%	1/4W
R020	1-249-427-11	CARBON	6.8K	5%	1/4W
R021	1-249-415-11	CARBON	680	5%	1/4W
R022	1-249-416-11	CARBON	820	5%	1/4W
R023	1-249-421-11	CARBON	2.2K	5%	1/4W
R025	1-249-426-11	CARBON	5.6K	5%	1/4W
R026	1-249-426-11	CARBON	5.6K	5%	1/4W
R027	1-249-426-11	CARBON	5.6K	5%	1/4W
R028	1-216-049-91	RES, CHIP	1K	5%	1/10W
R030	1-249-429-11	CARBON	10K	5%	1/4W
R031	1-216-045-00	RES, CHIP	680	5%	1/10W
R032	1-216-033-00	RES, CHIP	220	5%	1/10W
R033	1-247-815-91	CARBON	220	5%	1/4W
R038	1-216-049-91	RES, CHIP	1K	5%	1/10W
R040	1-249-413-11	CARBON	470	5%	1/4W
R043	1-249-417-11	CARBON	1K	5%	1/4W
R044	1-216-033-00	RES, CHIP	220	5%	1/10W
R045	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R046	1-216-033-00	RES, CHIP	220	5%	1/10W
R047	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R048	1-216-025-91	RES, CHIP	100	5%	1/10W
R049	1-216-089-91	RES, CHIP	47K	5%	1/10W
R050	1-249-429-11	CARBON	10K	5%	1/4W
R051		VARIANT (SEE VARIANT PARTS LIST)			
R053		VARIANT (SEE VARIANT PARTS LIST)			
R054	1-216-073-00	RES, CHIP	10K	5%	1/10W
R055	1-216-033-00	RES, CHIP	220	5%	1/10W
R056	1-249-425-11	CARBON	4.7K	5%	1/4W
R057	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R058	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R065	1-216-033-00	RES, CHIP	220	5%	1/10W
R066	1-216-033-00	RES, CHIP	220	5%	1/10W
R070		VARIANT (SEE VARIANT PARTS LIST)			
R071		VARIANT (SEE VARIANT PARTS LIST)			
R072	1-247-815-91	CARBON	220	5%	1/4W
R074	1-216-073-00	RES, CHIP	10K	5%	1/10W
R075	1-216-073-00	RES, CHIP	10K	5%	1/10W
R076	1-216-121-91	RES, CHIP	1M	5%	1/10W
R077	1-216-097-91	RES, CHIP	100K	5%	1/10W
R078	1-216-049-91	RES, CHIP	1K	5%	1/10W
R080		VARIANT (SEE VARIANT PARTS LIST)			
R085	1-216-073-00	RES, CHIP	10K	5%	1/10W
R086	1-216-073-00	RES, CHIP	10K	5%	1/10W
R087	1-216-045-00	RES, CHIP	680	5%	1/10W

Note:

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Note:

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COMMON PARTS LISTING

A

REF. NO.	PART NO.	DESCRIPTION			REMARK
R088	1-216-045-00	RES, CHIP	680	5%	1/10W
R089	1-216-045-00	RES, CHIP	680	5%	1/10W
R090	1-249-429-11	CARBON	10K	5%	1/4W
R091	1-249-429-11	CARBON	10K	5%	1/4W
R092	1-216-051-00	RES, CHIP	1K	5%	1/10W
R093	1-249-425-11	CARBON	4.7K	5%	1/4W
R096	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R097	1-216-073-00	RES, CHIP	10K	5%	1/10W
R099	1-249-425-11	CARBON	4.7K	5%	1/4W
R101	1-216-073-00	RES, CHIP	10K	5%	1/10W
R150	1-216-025-91	RES, CHIP	100	5%	1/10W
R151	1-216-025-91	RES, CHIP	100	5%	1/10W
R201	1-216-113-00	RES, CHIP	470K	5%	1/10W
R202		VARIANT (SEE VARIANT PARTS LIST)			
R204	1-216-022-00	RES, CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W
R206		VARIANT (SEE VARIANT PARTS LIST)			
R214		VARIANT (SEE VARIANT PARTS LIST)			
R215		VARIANT (SEE VARIANT PARTS LIST)			
R216		VARIANT (SEE VARIANT PARTS LIST)			
R217		VARIANT (SEE VARIANT PARTS LIST)			
R218		VARIANT (SEE VARIANT PARTS LIST)			
R219		VARIANT (SEE VARIANT PARTS LIST)			
R220		VARIANT (SEE VARIANT PARTS LIST)			
R221		VARIANT (SEE VARIANT PARTS LIST)			
R222		VARIANT (SEE VARIANT PARTS LIST)			
R223		VARIANT (SEE VARIANT PARTS LIST)			
R224		VARIANT (SEE VARIANT PARTS LIST)			
R225		VARIANT (SEE VARIANT PARTS LIST)			
R226		VARIANT (SEE VARIANT PARTS LIST)			
R227		VARIANT (SEE VARIANT PARTS LIST)			
R228		VARIANT (SEE VARIANT PARTS LIST)			
R229		VARIANT (SEE VARIANT PARTS LIST)			
R230		VARIANT (SEE VARIANT PARTS LIST)			
R231		VARIANT (SEE VARIANT PARTS LIST)			
R232		VARIANT (SEE VARIANT PARTS LIST)			
R233		VARIANT (SEE VARIANT PARTS LIST)			
R234		VARIANT (SEE VARIANT PARTS LIST)			
R235		VARIANT (SEE VARIANT PARTS LIST)			
R237		VARIANT (SEE VARIANT PARTS LIST)			
R238		VARIANT (SEE VARIANT PARTS LIST)			
R239	1-247-815-91	CARBON	220	5%	1/4W
R240	1-249-417-11	CARBON	1K	5%	1/4W
R241		VARIANT (SEE VARIANT PARTS LIST)			
R242	1-249-434-11	CARBON	27K	5%	1/4W
R243	1-216-689-11	RES, CHIP	39K	5%	1/10W
R245		VARIANT (SEE VARIANT PARTS LIST)			
R246		VARIANT (SEE VARIANT PARTS LIST)			
R247		VARIANT (SEE VARIANT PARTS LIST)			
R248		VARIANT (SEE VARIANT PARTS LIST)			
R249		VARIANT (SEE VARIANT PARTS LIST)			
R250		VARIANT (SEE VARIANT PARTS LIST)			
R251	1-216-041-00	RES, CHIP	470	5%	1/10W
R252	1-216-041-00	RES, CHIP	470	5%	1/10W
R253	1-215-899-11	METAL OXIDE	15K	5%	2W F
R254	1-216-025-91	RES, CHIP	100	5%	1/10W
R255	1-216-025-91	RES, CHIP	100	5%	1/10W
R256	1-249-425-11	CARBON	4.7K	5%	1/4W
R257	1-216-073-00	RES, CHIP	10K	5%	1/10W
R260		VARIANT (SEE VARIANT PARTS LIST)			
R261		VARIANT (SEE VARIANT PARTS LIST)			
R262		VARIANT (SEE VARIANT PARTS LIST)			
R268		VARIANT (SEE VARIANT PARTS LIST)			
R269		VARIANT (SEE VARIANT PARTS LIST)			
R280	1-216-022-00	RES, CHIP	75	5%	1/10W
R283		VARIANT (SEE VARIANT PARTS LIST)			
R284	1-216-295-91	SHORT			
R287		VARIANT (SEE VARIANT PARTS LIST)			
R288	1-216-295-91	SHORT			
R289	1-216-295-91	SHORT			
R290	1-216-025-91	RES, CHIP	100	5%	1/10W
R291	1-216-065-91	RES, CHIP	2.2K	5%	1/10W
R293	1-249-429-11	CARBON	10K	5%	1/4W
R294	1-216-295-91	SHORT			
R295	1-216-295-91	SHORT			
R297	1-247-807-31	CARBON	100	5%	1/4W
R298	1-216-025-91	RES, CHIP	100	5%	1/10W
R301	1-216-295-91	SHORT			
R303		VARIANT (SEE VARIANT PARTS LIST)			
R304	1-216-073-00	RES, CHIP	10K	5%	1/10W
R306	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R307	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R308	1-247-887-00	CARBON	220K	5%	1/4W
R309	1-247-863-91	CARBON	22K	5%	1/4W
R310	1-216-049-91	RES, CHIP	1K	5%	1/10W
R312	1-216-033-00	RES, CHIP	220	5%	1/10W
R313	1-247-815-91	CARBON	220	5%	1/4W
R314	1-247-815-91	CARBON	220	5%	1/4W
R315	1-247-815-91	CARBON	220	5%	1/4W
R316	1-216-025-91	RES, CHIP	100	5%	1/10W
R317	1-249-421-11	CARBON	2.2K	5%	1/4W
R318	1-216-073-00	RES, CHIP	10K	5%	1/10W
R319	1-216-073-00	RES, CHIP	10K	5%	1/10W
R321	1-216-069-00	RES, CHIP	6.8K	5%	1/10W

A COMMON PARTS LISTING

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REF. NO.	PART NO.	DESCRIPTION			REMARK	
R322	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R323	1-249-415-11	CARBON	680	5%	1/4W	
R324	1-249-425-11	CARBON	4.7K	5%	1/4W	
R325	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R329	1-216-025-91	RES, CHIP	100	5%	1/10W	
R330	1-216-025-91	RES, CHIP	100	5%	1/10W	
R331	1-216-025-91	RES, CHIP	100	5%	1/10W	
R341		VARIANT (SEE VARIANT PARTS LIST)				
R342		VARIANT (SEE VARIANT PARTS LIST)				
R343		VARIANT (SEE VARIANT PARTS LIST)				
R344		VARIANT (SEE VARIANT PARTS LIST)				
R347	1-216-045-00	RES, CHIP	680	5%	1/10W	
R350		VARIANT (SEE VARIANT PARTS LIST)				
R351		VARIANT (SEE VARIANT PARTS LIST)				
R352		VARIANT (SEE VARIANT PARTS LIST)				
R353	1-216-295-91	SHORT				
R354		VARIANT (SEE VARIANT PARTS LIST)				
R356	1-216-057-00	RES, CHIP	2.2K	5%	1/10W	
R357		VARIANT (SEE VARIANT PARTS LIST)				
R358		VARIANT (SEE VARIANT PARTS LIST)				
R359		VARIANT (SEE VARIANT PARTS LIST)				
R360		VARIANT (SEE VARIANT PARTS LIST)				
R361		VARIANT (SEE VARIANT PARTS LIST)				
R362		VARIANT (SEE VARIANT PARTS LIST)				
R363		VARIANT (SEE VARIANT PARTS LIST)				
R364		VARIANT (SEE VARIANT PARTS LIST)				
R365		VARIANT (SEE VARIANT PARTS LIST)				
R366		VARIANT (SEE VARIANT PARTS LIST)				
R367		VARIANT (SEE VARIANT PARTS LIST)				
R368		VARIANT (SEE VARIANT PARTS LIST)				
R369		VARIANT (SEE VARIANT PARTS LIST)				
R370		VARIANT (SEE VARIANT PARTS LIST)				
R372		VARIANT (SEE VARIANT PARTS LIST)				
R373		VARIANT (SEE VARIANT PARTS LIST)				
R374		VARIANT (SEE VARIANT PARTS LIST)				
R375		VARIANT (SEE VARIANT PARTS LIST)				
R376		VARIANT (SEE VARIANT PARTS LIST)				
R377		VARIANT (SEE VARIANT PARTS LIST)				
R378		VARIANT (SEE VARIANT PARTS LIST)				
R379		VARIANT (SEE VARIANT PARTS LIST)				
R380		VARIANT (SEE VARIANT PARTS LIST)				
R382		VARIANT (SEE VARIANT PARTS LIST)				
R383	1-216-057-00	RES, CHIP	2.2K	5%	1/10W	
R384	1-216-057-00	RES, CHIP	2.2K	5%	1/10W	
R385	1-216-057-00	RES, CHIP	2.2K	5%	1/10W	
R387		VARIANT (SEE VARIANT PARTS LIST)				
R388		VARIANT (SEE VARIANT PARTS LIST)				

REF. NO.		PART NO.	DESCRIPTION			REMARK	
R390		1-216-025-91	RES, CHIP	100	5%	1/10W	
R391		1-216-049-91	RES, CHIP	1K	5%	1/10W	
R392		1-216-025-91	RES, CHIP	100	5%	1/10W	
R393		1-216-049-91	RES, CHIP	1K	5%	1/10W	
R394		1-216-025-91	RES, CHIP	100	5%	1/10W	
R395			VARIANT (SEE VARIANT PARTS LIST)				
R396			VARIANT (SEE VARIANT PARTS LIST)				
R397			VARIANT (SEE VARIANT PARTS LIST)				
R400			VARIANT (SEE VARIANT PARTS LIST)				
R402			VARIANT (SEE VARIANT PARTS LIST)				
R403			VARIANT (SEE VARIANT PARTS LIST)				
R404			VARIANT (SEE VARIANT PARTS LIST)				
R432			VARIANT (SEE VARIANT PARTS LIST)				
R433			VARIANT (SEE VARIANT PARTS LIST)				
R501		1-249-421-11	CARBON	2.2K	5%	1/4W	
R502	⚠	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R508	⚠	1-215-864-00	METAL OXIDE	150	5%	1W	F
R532		1-215-437-00	METAL	4.7K	1%	1/4W	
R533		1-215-461-00	METAL	47K	1%	1/4W	
R534		1-215-453-00	METAL	22K	1%	1/4W	
R535		1-249-441-11	CARBON	100K	5%	1/4W	
R541		1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
R542		1-249-429-11	CARBON	10K	5%	1/4W	
R543		1-249-429-11	CARBON	10K	5%	1/4W	
R544		1-216-377-11	METAL OXIDE	4.7	5%	2W	F
R546		1-215-890-11	METAL OXIDE	470	5%	2W	F
R547		1-249-385-11	CARBON	2.2	5%	1/4W	F
R548		1-249-425-11	CARBON	4.7K	5%	1/4W	
R549		1-216-073-00	RES, CHIP	10K	5%	1/10W	
R552		1-247-887-00	CARBON	220K	5%	1/4W	
R553		1-260-312-11	CARBON	47	5%	1/2W	
R559		1-216-101-00	RES, CHIP	150K	5%	1/10W	
R560		1-216-093-91	RES, CHIP	68K	5%	1/10W	
R561		1-216-349-00	METAL OXIDE	1	5%	1W	F
R562		1-216-349-00	METAL OXIDE	1	5%	1W	F
R565		1-216-081-00	RES, CHIP	22K	5%	1/10W	
R566		1-216-077-00	RES, CHIP	15K	5%	1/10W	
R567		1-216-065-91	RES, CHIP	4.7K	5%	1/10W	
R568		1-216-121-91	RES, CHIP	1M	5%	1/10W	
R571	⚠	1-216-369-00	METAL OXIDE	1	5%	2W	F
R572	⚠	1-249-421-11	CARBON	2.2K	5%	1/4W	
R573	⚠	1-247-895-91	CARBON	470K	5%	1/4W	
R574	⚠	1-249-417-11	CARBON	1K	5%	1/4W	F
R575	⚠	1-247-891-00	CARBON	330K	5%	1/4W	
R576	⚠	1-249-441-11	CARBON	100K	5%	1/4W	
R577		1-249-432-11	CARBON	18K	5%	1/4W	
R578		1-216-467-11	METAL OXIDE	56K	5%	2W	F

Note:

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COMMON PARTS LISTING

A

REF. NO.		PART NO.	DESCRIPTION	REMARK			
R579		1-208-777-11	RES, CHIP	620	0.5%	1/10W	
R580		1-216-295-91	SHORT				
⋈ R582		1-208-826-11	RES, CHIP	68K	0.5%	1/10W	
R583		1-208-830-11	RES, CHIP	100K	0.5%	1/10W	
R584		1-208-806-11	RES, CHIP	10K	0.5%	1/10W	
R585		1-216-085-00	RES, CHIP	33K	5%	1/10W	
R586	⚠	1-216-069-00	RES, CHIP	6.8K	5%	1/10W	
R591		1-215-880-00	METAL OXIDE	10	5%	2W	F
R602		1-249-389-11	CARBON	4.7	5%	1/4W	F
R603		1-247-895-91	CARBON	470K	5%	1/4W	
R608		1-240-205-91	CARBON	22M	5%	1/2W	
R609		1-249-421-11	CARBON	2.2K	5%	1/4W	
R610		1-249-417-11	CARBON	1K	5%	1/4W	
R611		1-249-437-11	CARBON	47K	5%	1/4W	
R612		1-249-415-11	CARBON	680	5%	1/4W	
R614		1-249-429-11	CARBON	10K	5%	1/4W	
R616		1-260-302-51	CARBON	6.8	5%	1/2W	
R617		1-249-415-11	CARBON	680	5%	1/4W	
R620		1-219-512-11	CARBON	2.2M	5%	1/2W	
R623		1-249-429-11	CARBON	10K	5%	1/4W	
R625	⚠	1-215-429-00	METAL	2.2K	1%	1/4W	
R626	⚠	1-215-469-00	METAL	100K	1%	1/4W	
R630		1-249-421-11	CARBON	2.2K	5%	1/4W	
R631		1-249-429-11	CARBON	10K	5%	1/4W	
R632		1-208-806-11	RES, CHIP	10K	5%	1/10W	
R633		1-215-457-00	METAL	33K	1%	1/4W	
R634		1-249-417-11	CARBON	1K	5%	1/4W	
R635	⚠	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R636		1-208-798-11	RES, CHIP	4.7K	0.5%	1/10W	
R637		1-208-806-11	RES, CHIP	10K	0.5%	1/10W	
R638		1-208-814-91	RES, CHIP	22K	0.5%	1/10W	
R639		1-216-089-91	RES, CHIP	47K	5%	1/10W	
R640	⚠	1-216-089-91	RES, CHIP	47K	5%	1/10W	
R641		1-216-397-11	METAL OXIDE	4.7	5%	3W	F
R643		1-216-065-91	RES, CHIP	4.7K	5%	1/10W	
R644		1-249-418-11	CARBON	1.2K	5%	1/4W	
R647		1-260-081-11	CARBON	33	5%	1/2W	
R648		1-249-421-11	CARBON	2.2K	5%	1/4W	
R649		1-249-413-11	CARBON	470	5%	1/4W	
R650		1-249-415-11	CARBON	680	5%	1/4W	
R651			VARIANT (SEE VARIANT PARTS LIST)				
R652			VARIANT (SEE VARIANT PARTS LIST)				
R655		1-216-361-00	METAL OXIDE	0.22	5%	2W	F
R656		1-249-419-11	CARBON	1.5K	5%	1/4W	
R657		1-247-843-11	CARBON	3.3K	5%	1/4W	
R658			VARIANT (SEE VARIANT PARTS LIST)				
R659	⚠	1-202-961-11	CEMENTED	1.8	5%	10W	
R660	⚠	1-202-933-61	FUSIBLE	0.1	10%	1/2W	F

REF. NO.		PART NO.	DESCRIPTION	REMARK			
R661		1-216-485-11	METAL OXIDE	5.6K	5%	3W	F
R662		1-260-288-11	CARBON	0.47	5%	1/2W	
R663		1-216-362-11	METAL OXIDE	0.27	5%	2W	F
R664			VARIANT (SEE VARIANT PARTS LIST)				
R670		1-249-421-11	CARBON	2.2K	5%	1/4W	
R671		1-249-417-11	CARBON	1K	5%	1/4W	
R672		1-216-485-11	METAL OXIDE	5.6K	5%	3W	F
R674		1-249-415-11	CARBON	680	5%	1/4W	
R675		1-215-859-00	METAL OXIDE	22	5%	1W	F
R682		1-216-065-91	RES, CHIP	4.7K	5%	1/10W	
R683		1-249-421-11	CARBON	2.2K	5%	1/4W	
R688		1-216-485-11	METAL OXIDE	5.6K	5%	3W	F
R698		1-215-479-00	METAL	270K	1%	1/4W	

RELAY

RY601	⚠	1-755-018-11	RELAY
RY602	⚠	1-755-266-11	RELAY, AC POWER

SWITCH

S001	1-692-431-21	SWITCH, TACTILE
S002	1-692-431-21	SWITCH, TACTILE
S003	1-692-431-21	SWITCH, TACTILE
S004	1-692-431-21	SWITCH, TACTILE
S005	1-692-431-21	SWITCH, TACTILE
S006	1-692-431-21	SWITCH, TACTILE
S007	1-692-431-21	SWITCH, TACTILE

TRANSFORMER

T501	⚠	1-437-210-11	TRANSFORMER, HORIZONTAL DRIVE
T504	⚠	1-453-283-21	TRANSFORMER ASSY, FLYBACK
T601	⚠	1-423-895-11	TRANSFORMER, LINE FILTER (LFT)
T603			VARIANT (SEE VARIANT PARTS LIST)
T604	⚠	1-431-852-11	TRANSFORMER, CONVERTER (SRT)

THERMISTOR

THP601		VARIANT (SEE VARIANT PARTS LIST)

TUNER

TU101		VARIANT (SEE VARIANT PARTS LIST)

VARISTOR

VDR601		VARIANT (SEE VARIANT PARTS LIST)

CRYSTAL

X001	1-767-487-11	VIBRATOR, CRYSTAL
X301	1-567-505-11	OSCILLATOR, CRYSTAL

C COMPLETE PARTS LISTING

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF. NO.	PART NO.	DESCRIPTION				REMARK
C						
*	**A-1331-917-A**	**C MOUNTED PC BOARD**				
	4-382-854-11	**SCREW (M3X10), P, SW (+)**				
		CAPACITOR				
C1751	1-107-652-11	ELECT	10µF	20%	250V	
C1752	1-162-114-00	CERAMIC	0.0047µF		2KV	
C1755	1-107-667-11	ELECT	2.2µF	20%	160V	
		CONNECTOR				
CN1751*	1-564-509-11	PLUG, CONNECTOR 6P				
CN1752*	1-564-508-11	PLUG, CONNECTOR 5P				
CN1753	1-695-915-11	TAB (CONTACT)				
CN1754	1-695-915-11	TAB (CONTACT)				
		DIODE				
D1754	8-719-901-83	DIODE 1SS83				
D1755	8-719-901-83	DIODE 1SS83				
D1756	8-719-901-83	DIODE 1SS83				
D1758	8-719-302-43	DIODE EL1Z				
		IC				
IC1751	8-759-562-43	IC TDA6108JF/N1B				
		JACK				
J1751 ⚠	1-251-688-11	SOCKET, CRT				
		COIL				
L1751	1-408-613-31	INDUCTOR	68µH			

REF. NO.	PART NO.	DESCRIPTION				REMARK
		RESISTOR				
R1756	1-260-099-11	CARBON	1K	5%	1/2W	
R1757	1-260-099-11	CARBON	1K	5%	1/2W	
R1758	1-260-099-11	CARBON	1K	5%	1/2W	
R1759	1-260-087-11	CARBON	100	5%	1/2W	
R1760	1-260-123-11	CARBON	100K	5%	1/2W	
R1761	1-216-392-11	METAL OXIDE	1.8	5%	3W	F
R1763	1-247-807-31	CARBON	100	5%	1/4W	
R1764	1-247-807-31	CARBON	100	5%	1/4W	
R1765	1-247-807-31	CARBON	100	5%	1/4W	
R1770	1-260-132-11	CARBON	560K	5%	1/2W	

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

KV-20M42

A BOARD VARIANT LIST: KV-20M42

CAPACITOR

REF. NO.		PART NO.	DESCRIPTION			REMARK
C234		1-126-964-11	ELECT	10µF	20%	50V
C260		1-126-960-11	ELECT	1µF	20%	50V
C418		1-126-964-11	ELECT	10µF	20%	50V
C601	⚠	1-136-311-51	FILM	0.47µF	20%	125V
C613		1-117-893-11	ELECT	470µF	20%	250V
C638		1-136-311-11	FILM	0.47µF	20%	125V

DIODE

D215		8-719-110-17	DIODE RD10ESB2			

IC

IC400		8-759-490-18	IC TDA7056B/N1			
IC601	⚠	8-749-015-60	IC STR-F6624			

JACK

J201		1-580-441-71	JACK, PIN 2P			
J202		1-580-441-41	JACK, PIN 2P			

IC LINK

PS201	⚠	1-532-637-00	LINK, IC 1A/150V			

TRANSISTOR

Q202		8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			

RESISTOR

R231		1-216-073-00	RES,CHIP	10K	5%	1/10W
R235		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R246		1-216-295-91	SHORT			
R260		1-216-097-91	RES, CHIP	100K	5%	1/10W
R261		1-216-097-91	RES, CHIP	100K	5%	1/10W
R262		1-216-025-91	RES, CHIP	100	5%	1/10W
R269		1-216-067-00	RES, CHIP	5.6K	5%	1/10W
R400		1-249-438-11	CARBON	56K	5%	1/4W
R432		1-249-435-11	CARBON	33K	5%	1/4W
R433		1-216-083-00	RES, CHIP	27K	5%	1/10W
R651	⚠	1-219-513-11	CARBON	4.7M	5%	1/2W
R664		1-215-483-00	METAL	390K	1%	1/4W

REF. NO.		PART NO.	DESCRIPTION	REMARK

TRANSFORMER

T603	⚠	1-433-816-11	TRANSFORMER	

THERMISTOR

THP601		1-810-597-11	THERMISTOR, POSITIVE	

TUNER

TU101	⚠	8-598-430-00	TUNER, FSS BTF-FA401	

VARISTOR

VDR601	⚠	1-803-585-11	VARISTOR ,ERZV10D271	

A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s)only:

KV-21MB42C/21MB42M/21MB42P

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A BOARD VARIANT LIST: KV-21MB42C/21MB42M/21MB42P

CAPACITOR

REF. NO.		PART NO.	DESCRIPTION			
C234		1-126-964-11	ELECT	10µF	20%	50V
C260		1-126-960-11	ELECT	1µF	20%	50V
C418		1-126-964-11	ELECT	10µF	20%	50V
C601	⚠	1-136-311-61	FILM	0.47µF	20%	300V
C613		1-128-714-11	ELECT	330µF	20%	400V
C616		1-130-202-00	FILM	0.022µF	10%	400V
C617		1-107-824-11	CERAMIC	220pF	5%	1KV

DIODE

D215		8-719-110-17	DIODE RD10ESB2
D609		8-719-311-31	DIODE RU-1P

IC

IC400		8-759-490-18	IC TDA7056B/N1
IC601	⚠	8-749-013-75	IC STR-F6654

JACK

J201	1-580-441-71	JACK, PIN 2P
J202	1-580-441-41	JACK, PIN 2P

IC LINK

PS201	⚠	1-532-637-00	LINK, IC 1A/150V

TRANSISTOR

Q202	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX

RESISTOR

R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R235	1-208-794-11	RES, CHIP	3.3K	0.50%	1/10W
R246	1-216-295-91	SHORT			
R260	1-216-097-91	RES, CHIP	100K	5%	1/10W
R261	1-216-097-91	RES, CHIP	100K	5%	1/10W
R262	1-216-025-91	RES, CHIP	100	5%	1/10W
R269	1-216-069-00	RES, CHIP	6.8K	5%	1/10W
R400	1-249-438-11	CARBON	56K	5%	1/4W
R432	1-249-435-11	CARBON	33K	5%	1/4W
R433	1-216-083-00	RES, CHIP	27K	5%	1/10W

REF. NO.		PART NO.	DESCRIPTION			REMARK
R651	⚠	1-247-289-00	CARBON	8.2M	5%	1W
R652		1-202-961-11	CEMENTED	1.8	5%	10W
R658		1-215-929-11	METAL OXIDE	100K	5%	3W F
R664		1-215-479-00	METAL	270K	1%	1/4W
R698		1-215-479-00	METAL	270K	1%	1/4W

TRANSFORMER

T603	⚠	1-433-817-11	TRANSFORMER

THERMISTOR

THP601	1-803-540-11	THERMISTOR

TUNER

TU101	⚠	8-598-430-00	TUNER, FSS BTF-FA401

VARISTOR

VDR601	⚠	1-803-585-11	VARISTOR ,ERZV10D271

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

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A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

KV-21ME42/42C

A BOARD VARIANT LIST: KV-21ME42/42C

CAPACITOR

REF. NO.		PART NO.	DESCRIPTION			
C216		1-126-959-11	ELECT	0.47µF	20%	50V
C220		1-126-941-11	ELECT	470µF	20%	25V
C234		1-126-964-11	ELECT	10µF	20%	50V
C260		1-126-960-11	ELECT	1µF	20%	50V
C418		1-126-964-11	ELECT	10µF	20%	50V
C601	⚠	1-136-311-61	FILM	0.47µF	20%	300V
C613		1-128-714-11	ELECT	330µF	20%	400V
C616		1-130-202-00	FILM	0.022µF	10%	400V
C617		1-107-824-11	CERAMIC	220pF	5%	1KV

CONNECTOR

CN401	*	1-564-505-11	PLUG, CONNECTOR 2P	

DIODE

D215		8-719-110-17	DIODE RD10ESB2
D609		8-719-311-31	DIODE RU-1P

IC

IC401		8-759-490-17	IC TDA7057AQ/N2
IC601	⚠	8-749-013-75	IC STR-F6654

JACK

J201		1-580-441-71	JACK, PIN 2P
J202		1-580-441-41	JACK, PIN 2P

IC LINK

PS201	⚠	1-532-984-11	LINK, IC 2A/90V

TRANSISTOR

Q202		8-729-422-27	TRANSISTOR 2SD601A-QRS-TX

RESISTOR

R231		1-216-073-00	RES,CHIP	10K	5% 1/10W
R235		1-208-794-11	RES, CHIP	3.3K	0.50% 1/10W
R237		1-247-815-91	CARBON	220	5% 1/4W
R238		1-249-417-11	CARBON	1K	5% 1/4W
R245		1-216-295-91	SHORT		
R246		1-216-295-91	SHORT		
R260		1-216-097-91	RES, CHIP	100K	5% 1/10W
R261		1-216-097-91	RES, CHIP	100K	5% 1/10W
R262		1-216-025-91	RES, CHIP	100	5% 1/10W
R269		1-208-794-11	RES, CHIP	3.3K	0.50% 1/10W
R400		1-247-863-91	CARBON	22K	5% 1/4W
R432		1-249-430-11	CARBON	12K	5% 1/4W
R433		1-216-075-00	RES, CHIP	12K	5% 1/10W
R651	⚠	1-247-289-00	CARBON	8.2M	5% 1W
R652		1-202-961-11	CEMENTED	1.8	5% 10W
R658		1-215-929-11	METAL OXIDE	100K	5% 3W F
R664		1-215-479-00	METAL	270K	1% 1/4W
R698		1-215-479-00	METAL	270K	1% 1/4W

TRANSFORMER

T603	⚠	1-433-817-11	TRANSFORMER

THERMISTOR

THP601		1-803-540-11	THERMISTOR

TUNER

TU101	⚠	8-598-430-00	TUNER, FSS BTF-FA401

A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s)only:

KV-20S42/20S43

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A BOARD VARIANT LIST: KV-20S42/20S43

CAPACITOR

REF. NO.		PART NO.	DESCRIPTION			REMARK
C202		1-126-960-11	ELECT	1µF	20%	50V
C206		1-126-960-11	ELECT	1µF	20%	50V
C214		1-126-957-11	ELECT	0.22µF	20%	50V
C216		1-126-959-11	ELECT	0.47µF	20%	50V
C220		1-126-941-11	ELECT	470µF	20%	25V
C233		1-126-960-11	ELECT	1µF	20%	50V
C234		1-126-964-11	ELECT	10µF	20%	50V
C418		1-126-964-11	ELECT	10µF	20%	50V
C601	⚠	1-136-311-51	FILM	0.47µF	20%	125V
C613		1-117-893-11	ELECT	470µF	20%	250V
C638		1-136-311-11	FILM	0.47µF	20%	125V

CONNECTOR

CN401	*	1-564-505-11	PLUG, CONNECTOR 2P	

DIODE

D202		8-719-110-17	DIODE RD10ESB2
D204		8-719-110-17	DIODE RD10ESB2

IC

IC200		8-759-450-93	IC NJM2521M-TE1
IC401		8-759-490-17	IC TDA7057AQ/N2
IC601	⚠	8-749-015-60	IC STR-F6624

JACK

J201		1-580-443-11	JACK, PIN 3P
J202		1-691-110-11	JACK, PIN 3P

IC LINK

PS201	⚠	1-532-984-11	LINK, IC 2A/90V

RESISTOR

R010		1-216-033-00	RES, CHIP	220	5%	1/10W
R011		1-247-815-91	CARBON	220	5%	1/4W
R051		1-216-033-00	RES, CHIP	220	5%	1/10W
R070		1-249-425-11	CARBON	4.7K	5%	1/4W
R071		1-249-425-11	CARBON	4.7K	5%	1/4W
R202		1-216-113-00	RES, CHIP	470K	5%	1/10W
R206		1-247-895-91	CARBON	470K	5%	1/4W
R230		1-216-075-00	RES, CHIP	12K	5%	1/10W
R231		1-216-075-00	RES, CHIP	12K	5%	1/10W
R234		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R235		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R237		1-247-815-91	CARBON	220	5%	1/4W
R238		1-249-417-11	CARBON	1K	5%	1/4W
R241		1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R268		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R269		1-216-069-00	RES, CHIP	3.3K	.5%	1/10W
R400		1-247-863-91	CARBON	22K	5%	1/4W
R432		1-249-430-11	CARBON	12K	5%	1/4W
R433		1-216-075-00	RES, CHIP	12K	5%	1/10W
R651	⚠	1-219-513-11	CARBON	4.7M	5%	1/2W
R664		1-215-483-00	METAL	390K	1%	1/4W

TRANSFORMER

T603	⚠	1-433-816-11	TRANSFORMER

THERMISTOR

THP601		1-810-597-11	THERMISTOR, POSITIVE

TUNER

TU101	⚠	8-598-431-00	TUNER, FSS BTF-WA411

VARISTOR

VDR601	⚠	1-803-585-11	VARISTOR, ERZV10D271

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

KV-21SB42C/21SB42M

A BOARD VARIANT LIST: KV-21SB42C/21SB42M

CAPACITOR

REF. NO.		PART NO.	DESCRIPTION			
C202		1-126-960-11	ELECT	1µF	20%	50V
C206		1-126-960-11	ELECT	1µF	20%	50V
C214		1-126-957-11	ELECT	0.22µF	20%	50V
C216		1-126-959-11	ELECT	0.47µF	20%	50V
C220		1-126-941-11	ELECT	470µF	20%	25V
C233		1-126-960-11	ELECT	1µF	20%	50V
C234		1-126-964-11	ELECT	10µF	20%	50V
C418		1-126-964-11	ELECT	10µF	20%	50V
C601	⚠	1-136-311-61	FILM	0.47µF	20%	300V
C613		1-128-714-11	CAPACITOR	330µF		400V
C616		1-130-202-00	FILM	0.022µF	10%	400V
C617		1-107-824-11	CERAMIC	220pF	5%	1KV

CONNECTOR

CN401	*	1-564-505-11	PLUG, CONNECTOR 2P			

DIODE

D202		8-719-110-17	DIODE RD10ESB2			
D204		8-719-110-17	DIODE RD10ESB2			
D609		8-719-311-31	DIODE RU-1P			

IC

IC200		8-759-450-93	IC NJM2521M-TE1			
IC401		8-759-490-17	IC TDA7057AQ/N2			
IC601	⚠	8-749-013-75	IC STR-F6654			

JACK

J201		1-580-443-11	JACK, PIN 3P			
J202		1-691-110-11	JACK, PIN 3P			

IC LINK

PS201	⚠	1-532-984-11	LINK, IC 2A/90V			

RESISTOR

R010		1-216-033-00	RES, CHIP	220	5%	1/10W
R011		1-247-815-91	CARBON	220	5%	1/4W
R051		1-216-033-00	RES, CHIP	220	5%	1/10W
R070		1-249-425-11	CARBON	4.7K	5%	1/4W
R071		1-249-425-11	CARBON	4.7K	5%	1/4W
R202		1-216-113-00	RES, CHIP	470K	5%	1/10W
R206		1-247-895-91	CARBON	470K	5%	1/4W
R230		1-216-075-00	RES, CHIP	12K	5%	1/10W
R231		1-216-075-00	RES, CHIP	12K	5%	1/10W
R234		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R235		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R237		1-247-815-91	CARBON	220	5%	1/4W
R238		1-249-417-11	CARBON	1K	5%	1/4W
R241		1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R268		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R269		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R400		1-247-863-91	CARBON	22K	5%	1/4W
R432		1-249-430-11	CARBON	12K	5%	1/4W
R433		1-216-075-00	RES, CHIP	12K	5%	1/10W
R651	⚠	1-247-289-00	CARBON	8.2M	5%	1W
R652		1-202-961-11	CEMENTED	1.8	5%	10W
R658		1-215-929-11	METAL OXIDE	100K	5%	3W F
R664		1-215-479-00	METAL	270K	1%	1/4W
R698		1-215-479-00	METAL	270K	1%	1/4W

TRANSFORMER

T603	⚠	1-433-817-11	TRANSFORMER

THERMISTOR

THP601		1-803-540-11	THERMISTOR

TUNER

TU101	⚠	8-598-431-00	TUNER, FSS BTF-WA411

VARISTOR

VDR601	⚠	1-803-587-11	VARISTOR, ERZV10D471

A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s)only:

KV-21SE42/21SE42C

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A BOARD VARIANT LIST: KV-21SE42/21SE42C

CAPACITOR

REF. NO.		PART NO.	DESCRIPTION			
C202		1-126-960-11	ELECT	1MF	20%	50V
C206		1-126-960-11	ELECT	1MF	20%	50V
C214		1-126-957-11	ELECT	0.22MF	20%	50V
C216		1-126-959-11	ELECT	0.47MF	20%	50V
C220		1-126-941-11	ELECT	470MF	20%	25V
C233		1-126-960-11	ELECT	1MF	20%	50V
C234		1-126-964-11	ELECT	10MF	20%	50V
C418		1-126-964-11	ELECT	10MF	20%	50V
C601	⚠	1-136-311-61	FILM	0.47µF	20%	300V
C613		1-128-714-11	CAPACITOR	330µF	20%	400V
C616		1-130-202-00	FILM	0.022µF	10%	400V
C617		1-107-824-11	CERAMIC	220pF	5%	1KV

CONNECTOR

CN401	*	1-564-505-11	PLUG, CONNECTOR 2P

DIODE

D202	8-719-110-17	DIODE RD10ESB2
D204	8-719-110-17	DIODE RD10ESB2
D609	8-719-311-31	DIODE RU-1P

IC

IC200		8-759-450-93	IC NJM2521M-TE1
IC401		8-759-490-17	IC TDA7057AQ/N2
IC601	⚠	8-749-013-75	IC STR-F6654

JACK

J201	1-580-443-11	JACK, PIN 3P
J202	1-691-110-11	JACK, PIN 3P

IC LINK

PS201	⚠	1-532-984-11	LINK, IC 2A/90V

RESISTOR

REF. NO.		PART NO.	DESCRIPTION			
R010		1-216-033-00	RES, CHIP	220	5%	1/10W
R011		1-247-815-91	CARBON	220	5%	1/4W
R051		1-216-033-00	RES, CHIP	220	5%	1/10W
R070		1-249-425-11	CARBON	4.7K	5%	1/4W
R071		1-249-425-11	CARBON	4.7K	5%	1/4W
R202		1-216-113-00	RES, CHIP	470K	5%	1/10W
R206		1-247-895-91	CARBON	470K	5%	1/4W
R230		1-216-075-00	RES, CHIP	12K	5%	1/10W
R231		1-216-075-00	RES, CHIP	12K	5%	1/10W
R234		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R235		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R237		1-247-815-91	CARBON	220	5%	1/4W
R238		1-249-417-11	CARBON	1K	5%	1/4W
R241		1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R268		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R269		1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R400		1-247-863-91	CARBON	22K	5%	1/4W
R432		1-249-430-11	CARBON	12K	5%	1/4W
R433		1-216-075-00	RES, CHIP	12K	5%	1/10W
R651	⚠	1-247-289-00	CARBON	8.2M	5%	1W
R652		1-202-961-11	CEMENTED	1.8	5%	10W
R658		1-215-929-11	METAL OXIDE	100K	5%	3W F
R664		1-215-479-00	METAL	270K	1%	1/4W
R698		1-215-479-00	METAL	270K	1%	1/4W

TRANSFORMER

T603	⚠	1-433-817-11	TRANSFORMER

THERMISTOR

THP601	1-803-540-11	THERMISTOR

TUNER

TU101	⚠	8-598-431-00	TUNER, FSS BTF-WA411

VARISTOR

VDR601	⚠	1-803-587-11	VARISTOR, ERZV10D471

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

KV-21SE82/21SE82C

A BOARD VARIANT LIST: KV-21SE82/21SE82C

REF. NO.		PART NO.	DESCRIPTION			REMARK
			CAPACITOR			
C202		1-126-960-11	ELECT	1µF	20%	50V
C206		1-126-960-11	ELECT	1µF	20%	50V
C207		1-126-959-11	ELECT	0.47µF	20%	50V
C208		1-126-959-11	ELECT	0.47µF	20%	50V
C209		1-126-963-11	ELECT	4.7µF	20%	50V
C211		1-126-964-11	ELECT	10µF	20%	50V
C212		1-126-963-11	ELECT	4.7µF	20%	50V
C213		1-126-964-11	ELECT	10µF	20%	50V
C214		1-126-957-11	ELECT	0.22µF	20%	50V
C216		1-126-959-11	ELECT	0.47µF	20%	50V
C220		1-126-941-11	ELECT	470µF	20%	25V
C229		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C233		1-126-960-11	ELECT	1µF	20%	50V
C304		1-163-038-91	CERAMIC CHIP	0.1µF		25V
C307		1-126-964-11	ELECT	10µF	20%	50V
C340		1-126-960-11	ELECT	1µF	20%	50V
C348		1-163-003-11	CERAMIC CHIP	330pF	10%	50V
C350		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C351		1-126-964-11	ELECT	10µF	20%	50V
C352		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C353		1-163-038-91	CERAMIC CHIP	0.1µF		25V
C354		1-163-038-91	CERAMIC CHIP	0.1µF		25V
C355		1-164-222-11	CERAMIC CHIP	0.22µF		25V
C356		1-163-038-91	CERAMIC CHIP	0.1µF		25V
C357		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C358		1-104-664-11	ELECT	47µF	20%	25V
C359		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C360		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C361		1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C362		1-126-964-11	ELECT	10µF	20%	50V
C400		1-126-963-11	ELECT	4.7µF	20%	50V
C401		1-126-956-91	ELECT	0.1µF	20%	50V
C402		1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C403		1-126-963-11	ELECT	4.7µF	20%	50V
C404		1-126-963-11	ELECT	4.7µF	20%	50V
C405		1-126-963-11	ELECT	4.7µF	20%	50V
C406		1-126-963-11	ELECT	4.7µF	20%	50V
C407		1-126-964-11	ELECT	10µF	20%	50V
C410		1-126-963-11	ELECT	4.7µF	20%	50V
C411		1-126-956-91	ELECT	0.1µF	20%	50V
C412		1-130-495-00	FILM	0.1µF	5%	50V
C413		1-126-967-11	ELECT	47µF	20%	50V
C414		1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C415		1-126-956-91	ELECT	0.1µF	20%	50V
C416		1-126-963-11	ELECT	4.7µF	20%	50V
C418		1-126-963-11	ELECT	4.7µF	20%	50V
C601	⚠	1-136-311-61	FILM	0.47µF	20%	300V
C613		1-128-713-11	CAPACITOR	330µF	20%	400V
C616		1-130-202-00	FILM	0.022µF	10%	400V
C617		1-107-824-11	CERAMIC	220pF	5%	1KV
			CONNECTOR			
CN401	*	1-564-505-11	PLUG, CONNECTOR 2P			
			DIODE			
D202		8-719-110-17	DIODE RD10ESB2			
D204		8-719-110-17	DIODE RD10ESB2			
D206		8-719-110-17	DIODE RD10ESB2			
D207		8-719-109-66	DIODE RD3.3ESB2			
D280		8-719-110-17	DIODE RD10ESB2			
D609		8-719-311-31	DIODE RU-1P			
			IC			
IC200		8-759-450-93	IC NJM2521M-TE1			
IC202		8-759-100-96	IC NJM4558M-TE2			
IC302		8-752-385-80	IC CXD2073S			
IC401		8-759-490-17	IC TDA7057AQ/N2			
IC402		8-752-072-39	IC CXA2021S			
IC601	⚠	8-749-013-75	IC STR-F6654			
			JACK			
J200		1-580-441-61	JACK, PIN 2P			
J201		1-580-443-11	JACK, PIN 3P			
J202		1-691-110-11	JACK, PIN 3P			
			COIL			
L351		1-414-271-11	INDUCTOR	47µH		
L352		1-414-267-11	INDUCTOR	10µH		
			IC LINK			
PS201	⚠	1-532-984-11	LINK, IC 2A/90V			

A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s)only:

KV-21SE82/82C

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A BOARD VARIANT LIST: KV-21SE82/82C

TRANSISTOR

REF. NO.	PART NO.	DESCRIPTION	REMARK
Q200	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q201	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q206	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q207	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q340	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q350	8-729-216-22	TRANSISTOR 2SA1162-G	
Q351	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q352	8-729-216-22	TRANSISTOR 2SA1162-G	
Q353	8-729-216-22	TRANSISTOR 2SA1162-G	
Q354	8-729-216-22	TRANSISTOR 2SA1162-G	
Q355	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q356	8-729-216-22	TRANSISTOR 2SA1162-G	
Q357	8-729-216-22	TRANSISTOR 2SA1162-G	
Q358	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q359	8-729-216-22	TRANSISTOR 2SA1162-G	
Q380	8-729-216-22	TRANSISTOR 2SA1162-G	

RESISTOR

REF. NO.	PART NO.	DESCRIPTION			REMARK
R010	1-216-033-00	RES, CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES, CHIP	220	5%	1/10W
R053	1-247-815-91	CARBON	220	5%	1/4W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W
R080	1-249-429-11	CARBON	10K	5%	1/4W
R202	1-216-113-00	RES, CHIP	470K	5%	1/10W
R206	1-247-895-91	CARBON	470K	5%	1/4W
R214	1-216-113-00	RES, CHIP	470K	5%	1/10W
R215	1-216-033-00	RES, CHIP	220	5%	1/10W
R216	1-216-113-00	RES, CHIP	470K	5%	1/10W
R217	1-216-033-00	RES, CHIP	220	5%	1/10W
R218	1-216-067-00	RES, CHIP	5.6K	5%	1/10W
R219	1-216-073-00	RES, CHIP	10K	5%	1/10W
R220	1-216-073-00	RES, CHIP	10K	5%	1/10W
R221	1-216-073-00	RES, CHIP	10K	5%	1/10W
R222	1-216-067-00	RES, CHIP	5.6K	5%	1/10W
R223	1-249-429-11	CARBON	10K	5%	1/4W
R224	1-249-429-11	CARBON	10K	5%	1/4W
R225	1-216-073-00	RES, CHIP	10K	5%	1/10W
R226	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R227	1-216-097-91	RES, CHIP	100K	5%	1/10W
R228	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R229	1-216-097-91	RES, CHIP	100K	5%	1/10W
R232	1-216-073-00	RES, CHIP	10K	5%	1/10W
R233	1-216-073-00	RES, CHIP	10K	5%	1/10W
R234	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R247	1-216-025-91	RES, CHIP	100	5%	1/10W
R248	1-216-025-91	RES, CHIP	100	5%	1/10W
R249	1-216-081-00	RES, CHIP	22K	5%	1/10W
R250	1-216-081-00	RES, CHIP	22K	5%	1/10W
R268	1-216-081-00	RES, CHIP	22K	5%	1/10W
R269	1-216-081-00	RES, CHIP	22K	5%	1/10W
R283	1-216-022-00	RES, CHIP	75	5%	1/10W
R287	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R303	1-216-025-91	RES, CHIP	100	5%	1/10W
R341	1-216-017-91	RES, CHIP	47	5%	1/10W
R342	1-216-097-91	RES, CHIP	100K	5%	1/10W
R343	1-216-073-00	RES, CHIP	10K	5%	1/10W
R344	1-216-061-00	RES, CHIP	3.3K	5%	1/10W
R350	1-208-766-11	RES, CHIP	220	0.5%	1/10W
R351	1-208-766-11	RES, CHIP	220	0.5%	1/10W
R352	1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R354	1-208-794-11	RES, CHIP	3.3K	0.5%	1/10W
R357	1-216-091-00	RES, CHIP	56K	5%	1/10W
R358	1-216-043-91	RES, CHIP	560	5%	1/10W
R359	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R360	1-163-001-11	CERAMIC CHIP	220pF	10%	50V
R361	1-216-049-91	RES, CHIP	1K	5%	1/10W
R362	1-216-043-91	RES, CHIP	560	5%	1/10W
R363	1-216-037-00	RES, CHIP	330	5%	1/10W
R364	1-216-025-91	RES, CHIP	100	5%	1/10W
R365	1-216-295-91	SHORT			
R366	1-216-053-00	RES, CHIP	1.5K	5%	1/10W
R367	1-216-057-00	RES, CHIP	2.2K	5%	1/10W
R368	1-216-025-91	RES, CHIP	100	5%	1/10W
R369	1-216-045-00	RES, CHIP	680	5%	1/10W
R370	1-216-033-00	RES, CHIP	220	5%	1/10W
R372	1-216-035-00	RES, CHIP	270	5%	1/10W
R373	1-216-025-91	RES, CHIP	100	5%	1/10W
R374	1-216-025-91	RES, CHIP	100	5%	1/10W
R375	1-216-053-00	RES, CHIP	1.5K	5%	1/10W
R376	1-216-049-91	RES, CHIP	1K	5%	1/10W
R377	1-216-049-91	RES, CHIP	1K	5%	1/10W
R378	1-216-041-00	RES, CHIP	470	5%	1/10W
R379	1-216-049-91	RES, CHIP	1K	5%	1/10W

Note:□

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

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A BOARD VARIANT PARTS LIST PACKAGING LIST & ACCESSORIES

The variant parts on this page belong to the following model(s) only:

KV-21SE82/82C

REF. NO.		PART NO.	DESCRIPTION				
A BOARD VARIANT LIST: KV-21SE82/82C							
R380		1-208-790-11	RES, CHIP	2.2K	0.5%	1/10W	
R382		1-216-053-00	RES, CHIP	1.5K	5%	1/10W	
R387		1-216-025-91	RES, CHIP	100	5%	1/10W	
R388		1-216-025-91	RES, CHIP	100	5%	1/10W	
R395		1-216-025-91	RES, CHIP	100	5%	1/10W	
R396		1-216-025-91	RES, CHIP	100	5%	1/10W	
R397		1-216-025-91	RES, CHIP	100	5%	1/10W	
R400		1-247-863-91	CARBON	22K	5%	1/4W	
R402		1-216-121-91	RES, CHIP	1M	5%	1/10W	
R403		1-247-815-91	CARBON	220	5%	1/4W	
R404		1-247-815-91	CARBON	220	5%	1/4W	
R432		1-249-428-11	CARBON	8.2K	5%	1/4W	
R651	⚠	1-247-289-00	CARBON	8.2M	5%	1W	
R652		1-202-961-11	CEMENTED	1.8	5%	10W	
R658		1-215-929-11	METAL OXIDE	100K	5%	3W	F
R664		1-215-479-00	METAL	270K	1%	1/4W	
R698		1-215-479-00	METAL	270K	1%	1/4W	
TRANSFORMER							
T603	⚠	1-433-817-11	TRANSFORMER				
THERMISTOR							
THP601		1-803-540-11	THERMISTOR				
TUNER							
TU101	⚠	8-598-431-00	TUNER, FSS BTF-WA411				
VARISTOR							
VDR601	⚠	1-803-587-11	VARISTOR, RZV10D471				

REF. NO.	PART NO.	DESCRIPTION	REMARK

PACKAGING LIST AND ACCESSORIES

	1-417-182-11	CONVERTER (EAC-25)
	1-501-730-41	ANTENNA, TELESCOPIC
	3-866-075-41	MANUAL, INSTRUCTION (KV-21SE82/82C)
	3-866-072-21	MANUAL, INSTRUCTION (KV-20M42/S42/S43)
	3-866-073-41	MANUAL, INSTRUCTION (KV-21SB42C/42M/MB42C/42M/42P/ME42/42C/ SB42C/42M/21SE42/42C)
	1-475-801-11	REMOTE COMMANDER (RM-Y165) (KV-21SE82/21SE82C)
	1-475-757-11	REMOTE COMMANDER (RM-Y156) (KV-20M42/21MB42P/42C/42M/21ME42/42C)
	1-475-635-11	REMOTE COMMANDER (RM-Y155) (KV-20S42/21SB42M/42C/21SE42/42C)
	1-475-631-11	REMOTE COMMANDER (RM-Y156W) (KV-20S43)
	9-939-830-11	BATTERY COVER, REMOTE
	4-041-254-01	BAG, PROTECTION
*	4-061-384-02	CUSHION, (UPPER) (ASSY) (KV-21SE82/82C)
*	4-061-392-01	CUSHION, (UPPER) (ASSY) (KV-21ME42/42C/SE42/42C)
*	4-062-747-01	CUSHION, (UPPER) (ASSY) (KV-20M42/S42/S43/21MB42C/42M/42P/SB42C/42M)
*	4-061-383-02	CUSHION, (LOWER) (ASSY) (KV-21SE82/82C)
*	4-061-391-01	CUSHION, (LOWER) (ASSY) (KV-21ME42/42C/SE42/42C)
*	4-062-748-01	CUSHION, (LOWER) (ASSY) (KV-20M42/S42/S43/21MB42C/42M/42P/SB42C/42M)
*	4-064-000-02	CARTON, INDIVIDUAL (KV-21SE82/82C)
*	4-052-651-11	CARTON, INDIVIDUAL (KV-20M42/S42/S43)
*	4-061-395-11	CARTON, INDIVIDUAL (KV-21ME42/42C/21SE42/42C
*	4-062-755-11	CARTON, INDIVIDUAL (KV-21MB42C/42M/42P/21SB42C/42M)

NOTES:

Sony Corporation
Sony Technology Center
Product Quality Division
Service Promotion Department

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